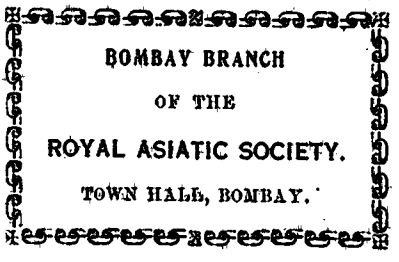
Vaccination throughout the Bombay Presidency and Sind
Reports for the years 1854-55 & 1863-64

00133637



Digitized with financial assistance from
Government of Maharashtra
on 01 February, 2020

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

133637

FOR THE YEAR 1854-1855.

Bombay:
PRINTED FOR GOVERNMENT
AT THE
BOMBAY EDUCATION SOCIETY'S PRESS.

1856.

00133637

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

1854-55.

No. 428 of 1856.

To the SECRETARY TO GOVERNMENT,
General Department.

Sir,—I have the honour, by direction of the Medical Board, to forward the Annual Report of Vaccination for the year commencing 1st April 1854, and terminating 31st March 1855, for submission to the Right Honorable the Governor in Council, and for transmission to the Honorable the Court of Directors.

2. In addition to the Annual Return framed according to Form No. 55, and Art. 52 Sect. VIII. of the Medical Regulations, the Medical Board have directed Supplementary Tables to be prepared, which, under different headings, exhibit the entire working of the Establishment.

I. GENERAL ANALYSIS OF SUPPLEMENTARY TABLES.

3. Of these Supplementary Tables, No. 1 shows the progress of vaccination under the several Superintendents, who, with the exception of the Medical Officer at the Presidency, devote their whole time and attention to its propagation, and who, during eight or nine months of the year, travel throughout portions of the districts committed to their charge. (Vide Arts. 2, 3, and 4, Sect. VIII. of the Medical Regulations).

Table No. 1.

4. This Table also shows the number of moveable or Divisional

establishments, the names of the Divisions, and of the Medical Officers in charge of the duties, the number of Native Vaccinators attached, the total number of vaccinations performed during the year, the same compared with last year, the total number arranged according to sex, caste, and result, the ratio of successful vaccinations to total number of persons vaccinated, the average number of operations performed by each Vaccinator, the yearly payment made to the Vaccinators, and the average expense of each hundred persons vaccinated.

Table No. 2.

5. Table No. 2 exhibits, in the same manner as Table No. 1, the progress of vaccination under the Civil Surgeons, and other Medical Officers who, located in the principal towns of the Presidency, confine their vaccinating duties to the spot, or its immediate neighbourhood.

Table No. 3.

6. Table No. 3 is compiled in the same manner as the two former Tables, and represents the part taken in disseminating vaccination by the Native Chiefs, who employ Vaccinators regularly instructed, their operations being carried on under the supervision of the several Divisional Superintendents.

Table No. 4.

7. Table No. 4 represents the number of vaccinations performed by Regimental Medical Officers of European and Native Corps, amongst the soldiers, their families, and followers, in the several Divisions of the Presidency, arranged under the headings of males, females, and children.

Tables Nos. 5, 6, and 7.

8. Table No. 5 exhibits the number of vaccinations in each month, and the per-centage of successful cases; Table No. 6 the same arranged according to sex, caste, and result; whilst Table No. 7 is a general abstract of Tables 1, 2, 3, & 4.

II. VACCINATION UNDER SUPERINTENDENTS.

Number of Divisions, Superintendents, and Vaccinators.

9. Attention will in the first place be directed to the information given in Table No. 1. It will be observed by a reference to this Table that there are seven Divisions, each entrusted to a Medical Officer, and that the total number of Native Vaccinators employed is one hundred and nineteen (119).

Increased numbers over last year the effect of revised Scheme of Vaccination.

10. In the last Annual Report an account was given of the introduction of the New Rules regarding Vaccination, and allusion was made to the establishment of an additional Division (the Southern Deccan). During the year under review, the new Rules have been brought into active operation, and the Division just noticed included in the Returns; consequently, as might have been anticipated, the number vaccinated this

year exceeds that of last, when the system was only in process of organisation, and the Southern Deccan Circle but just created. This excess is shown to be twenty thousand nine hundred and ninety-eight (20,998).

Former mode of comparing Results not now applicable.

11. It has been usual hitherto to compare the work of one year with that of the average of the preceding five years, a mode of computation which, when the data are the same, is calculated to secure accurate results; but upon the introduction of a new system which affects the data, not only by including another Division in the calculation, but by bringing a large increase to the vaccinating establishment, such comparison cannot be fairly instituted, and consequently the work of the present and of several succeeding years should be compared with that of the year immediately antecedent.

General Summary of Vaccination under the Superintendents.

12. Before proceeding to notice each Division separately, it will be useful to give a summary of the whole moveable establishments.

Total Number Vaccinated.

13. It may be observed that the total number of persons vaccinated is one hundred and sixty-one thousand nine hundred and seventy-nine (161,979), and that the Divisions have the following numerical relation :—

1, Western Guzerat	40,620	or	25	per cent.	of the whole number.
2, Konkun	32,502	„	20	„	„
3, Northern Deccan	23,125	„	14·2	„	„
4, Sind	20,600	„	12·7	„	„
5, Southern Deccan	19,753	„	12·3	„	„
6, Eastern Guzerat	18,161	„	11·2	„	„
7, Presidency	7,218	„	4·4	„	„

In comparison with last year, there is an increase in Western Guzerat, in the Northern and Southern Deccan, and in Sind; but a slight falling off in the other Divisions.

Total of Sexes.

14. Arranged according to sex, it appears that there are eighty-nine thousand eight hundred and ninety-one (89,891) males, and seventy-two thousand and eighty-eight (72,088) females, a preponderance of seventeen thousand eight hundred and three (17,803) males (or about 54 per cent. males). In all the Divisions this disproportion of the sexes is exhibited.

Total of Castes.

15. Looking to the arrangement of castes, it will be observed that there are one hundred and thirty-five thousand and sixty-seven (135,067) Hindoos, or 83·3 per cent.; twenty-five thousand six hundred and five (25,605) Mussulmans, or 15·8 per cent.; one thousand and sixty-one (1,061) Christians, or 0·6 per cent.; two hundred and nine (209) Parsees, or 0·1 per cent.; thirty-

seven (37) of other castes, 0·02 per cent. With regard to the result, it appears that one hundred and forty-three thousand nine hundred and forty-six (143,946), or 88·8 per cent., were operated upon successfully, whilst in five thousand six hundred and forty-five (5,645) instances the prophylactic failed, and in twelve thousand three hundred and eighty-eight (12,388) the result is recorded as "doubtful."

Total of Result.

16. The average number of persons vaccinated by each Vaccinator is about one thousand three hundred and sixty-three (1,363) during the year, which scarcely amounts to four (4) each per diem; but it is evident that there must be many days in which vaccination cannot be performed, and that although the above average is correct by calculation, yet that it does not represent the actual numbers vaccinated upon each day.

Average Number Vaccinated by each Vaccinator.

17. By Table No. 5 it will be seen the period in which vaccination is most efficiently carried on is from December to May. It is at this season that the Superintendents are on their tours of inspection, and that the weather is most favourable for the propagation of the vaccine disease. During the monsoon the opportunities for extending vaccination are comparatively few.

Most favourable period for Vaccination.

18. Taking the whole year, the monthly average is thirteen thousand four hundred and ninety-eight (13,498), but for the months from June to December it decreases to eleven thousand five hundred and sixty-three (11,563), whilst for the other six months, from December to June, it rises as high as fifteen thousand four hundred and thirty-one (15,431). The most favourable months are January and February, when about sixteen thousand persons (16,000) were vaccinated; the least favourable are July and August, when about ten thousand (10,000) and eleven thousand (11,000) were vaccinated.

Monthly Averages of Vaccination.

19. The average expense of vaccinating one hundred (100) persons, exclusive of the Pay and Allowances of the Medical Officer (the Superintendent), is Rupees eleven, six annas, and three pies (11-6-3), an increase of rupee one, three annas, and six pies (1-3-6) over last year, or about one anna and three quarters for each individual operated on. It is highest at the Presidency, and lowest in the Konkun and in the Western Division of Guzerat.

Cost of Vaccination.

Presidency Division.

20. Each Division will now be separately examined. The *Presidency Division* is confined to the Island of Bombay. The superintendence is entrusted to

Extent of, &c.

one of the Assistant Surgeons of the Jamsetjee Jejeebhoy Hospital, and the Central Depôt is contiguous to that Institution. Mondays and Tuesdays at 10 A. M. are the days and hours fixed for vaccination, the intermediate days being spent by the establishment in domiciliary vaccination, or in collecting subjects for the ensuing week.

Native Vaccinators, &c.

21. The Establishment consists of one Head Vaccinator, one First Assistant, six Assistants, and two Apprentices, at a monthly salary of Rupees one hundred and thirty-four (134).

Number Vaccinated, &c.

The total number of children vaccinated was seven thousand two hundred and eighteen (7,218), or four thousand four hundred and three (4,403) males, and two thousand eight hundred and fifteen (2,815) females. The Hindoos comprised four thousand nine hundred and twenty-two (4,922) persons; Mussulmans one thousand two hundred and eighty-nine (1,289); Christians eight hundred and thirty (830); and Parsees one hundred and seventy-seven (177); the per-centage of successful vaccination was 85·7.

Report of the Superintendent.

22. The Superintendent (Mr. Peet) in his Annual Report states,—"The number of children vaccinated during the past year is rather less than the average of the preceding ten years. This is probably due to the increase in the number of stations in the Island of Bombay, consequent upon the co-operation of the Graduates of the Grant Medical College and others in extending the benefits of vaccination amongst the Native community. In former years, also, there has been at times a considerable number of persons vaccinated, who were about to proceed to the Mauritius as coolies. But with every allowance for the falling off on these accounts, it cannot, I think, be said that vaccination in Bombay is keeping pace with the increase of the population. The number of stations for gratuitous vaccination have, during the last year and a half, been much augmented, but not with the effect at present of leading to any great extension of the practice. The most interesting circumstance in the history of vaccination during the year now reported on, is the successful employment of lymph forwarded from England by the Honorable Court of Directors. The vesicles produced by this lymph have, in appearance, and in the regularity of their course, been more satisfactory than those observed previous to the introduction of the fresh virus. The vaccine disease is now well developed, and every possible means will be taken to extend its protective influence, but I do not anticipate the realization of much success until the interference of Government is in some way or other exercised."

Konkun Division.

23. The *Konkun Division* is of large extent. It is almost entirely on the sea-board, and extends from Damaun to Goa. It includes the Collectorates in the Northern and Southern Konkun, and all the islands, with the exception of Bombay.

Size, Extent, &c.

24. The Vaccinating Staff consists (besides the Superintendent) of a Head Vaccinator on Rupees twenty-four (24) a month, two First Assistants on Rupees eighteen (18) each, eleven Assistants on Rupees twelve (12) each, and four Apprentices on Rupees ten (10); total Rupees two hundred and thirty-two (232) a month.

Establishment.

25. The gross number of persons vaccinated during the year was thirty-two thousand five hundred and two (32,502), being a decrease from last year of two thousand four hundred and thirty-four (2,434). The Superintendent (Mr. Ward) remarks that "the numbers are larger by ten thousand and forty-five (10,045) than the average of the five preceding years"; but correctly accounts for this by the fact that the establishment has been almost doubled during that time, and hence that the Vaccinators can be spread over a larger extent of country. The causes of the deficit as compared with last year he ascribes to—

Total Number Vaccinated.

Causes of Decrease.

1*st*.—"Withdrawal of the District Peons from attendance on the Vaccinators."

2*nd*.—"The great sickness and mortality from cholera which prevailed throughout the Division in the monsoon, in some instances producing a total suspension of the work."

3*rd*.—The crippled state of his establishment, by two of his Assistants having died, two others dismissed, and the Head Vaccinator removed for inefficiency, consequent upon old age.

26. Of the total number vaccinated there were sixteen thousand seven hundred and seven (16,707) males, and fifteen thousand seven hundred and ninety-five (15,795) females; arranged into castes, the Hindoos were thirty-one thousand six hundred and sixty-seven (31,667) in number; Mussulmans six hundred and seventy-six (676); Christians one hundred and twenty-two (122); and other castes (Chinese and Malays) thirty-seven (37).

Sexes.

Castes.

27. With respect to the success which has attended these operations, it appears that there were thirty thousand four hundred and nine (30,409), or 93·5 per cent. suc-

Result.

cessful cases, and that the remainder were either altogether unsuccessful or "doubtful."

Months.

28. The months in which there were fewest vaccinations are July and August,—those in which there were the largest number, January and February.

Average Number Vaccinated by each Vaccinator.

29. The average number of persons operated upon by each Vaccinator was one thousand eight hundred and five (1,805), which is above the general average; whilst the expenses for every one hundred (100) persons vaccinated,

Cost of Vaccination.

was lower than in any other Division, amounting to only Rupees eight and nine annas (8-9-0), this however being an increase over last year of rupee one and nine annas (1-9-0).

Topics embraced in the Superintendent's Report.

30. The Superintendent, in his Annual Report, dwells much on the subject of withdrawal of peons as a cause of decreased numbers, forgetting that for the larger portion of the preceding year he was also deprived of them, and yet there was no falling off in the numbers. After mentioning that "complaints loud and repeated have been made to me by the several Native Assistants of the almost insuperable difficulties which alone and unaided they have occasionally to contend with, in the prosecution of their labours," he goes on to say—"It is true, that the District authorities, when applied to, have invariably lent all the aid in their power, and have generally succeeded in overcoming the objections of the villagers, but it has been too late, the mischief has already occurred, &c." He mentions that in the Kusba towns vaccination is seldom carried on, for the reason that the inhabitants are chiefly high-caste Hindoos and others who pertinaciously oppose vaccination; and he suggests that peons might be furnished on the two days of the week which are set aside for vaccination, by an arrangement with the Police or Revenue Departments.

Tours of the Superintendent, and Results.

31. The Superintendent visited, during the last six months, nine members of his establishment, and reports himself satisfied with the manner in which the duties were performed. He says:—"The lymph everywhere I find to be genuine, but it had been long unrenewed. Latterly, however, some fresh vaccine lymph from England has been tried successfully, from which a very plentiful supply of very excellent lymph has been obtained, which is now in course of dissemination throughout the Division. Small-pox has existed in the Division, more or less, throughout the year. For the first nine months the cases were few in number, occurred sporadically, and were mild in character; latterly, however, it has prevailed more extensively, and with considerable virulence, parti-

cularly in the Southern Konkun, where the mortality resulting from it has been proportionally severe. One instance only of the practice of inoculation has been brought to my notice, and this occurred recently at a large Kusba town, under the eyes of the District authorities. The circumstance was reported to the Magistrate, who issued instructions that if mortality resulted security should be taken from the Inoculator not again to practise his baneful calling. An order, I believe, has been issued under the authority of Government, for the suppression of Inoculation throughout the Districts, but such an order I imagine must be ineffectual so long as the law confers no authority to enforce it; and it will be necessary, I should think, to put in force ulterior and more authoritative measures ere we can attempt to suppress this evil with any probability of success."

North Deccan Division.

Size, Extent, &c.

32. The *North Deccan Division* comprises the large Collectorates of Poona and Ahmednuggur, with the Sub-Collectorate of Nassick, and the province of Khandeish. Its Vaccinating establishment is similar to that of the Konkun, consisting of one Head Vaccinator, two First Assistants, eleven Assistants, and four Apprentices, at a monthly rate of pay of Rupees two hundred and thirty-two (232).

Establishment, Pay, &c.

Number Vaccinated, and Cause of Increase.

33. The number of children vaccinated was twenty-three thousand one hundred and twenty-five (23,125), or twelve thousand two hundred and seventy (12,270) males, and ten thousand eight hundred and fifty-five (10,855) females. This is an increase over last year of one thousand three hundred and seventy-seven (1,377), due doubtless, as the Superintendent (Mr. Davey) states, to the increase made to the establishment, which has been nearly doubled in five years.

Caste.

34. Amongst Hindoos there were twenty-one thousand nine hundred and eighty-five (21,985) operations performed; one thousand one hundred and thirty-three (1,133) amongst Mussulmans, and seven (7) amongst Christians. Of the total number there were twenty-one thousand seven hundred and eighty-four (21,784) or 94·2 per cent. of successful vaccination, only two hundred and eighty-four (284) are recorded as being unsuccessful, and one thousand and fifty-seven (1,057) as doubtful. This is the highest rate of per-centage of success in any Division, and only allows six (6) out of every one hundred (100) for failures. The accuracy of the Returns might perhaps be considered doubtful, but on this point the Superintendent speaks very

Result.

The high per-centage of Successful Cases may be considered trustworthy.

confidently. He says:—"In no instance have I had the slightest reason to question the accuracy of the Returns. This conviction has not, however, prevented my testing them, both personally and through the Collector: the result has in every instance borne out their truthfulness."

Character of the Vaccine Lymph everywhere good.

35. "The very small proportion of unsuccessful cases" he considers to be a proof of the vaccine lymph being "effective and highly satisfactory," which was its condition, he states, "everywhere" through the Division. He is of opinion that if fresh vaccine lymph could always be employed, and immediate vaccination practised, that unsuccessful cases would rarely occur, and that the failures are chiefly due to being "occasionally compelled to use lymph from glasses on first entering a village, and many of the first operations consequently fail."

Indirect Vaccination often fails.

Average Number Vaccinated by each Vaccinator.

36. The average number of operations performed by each Vaccinator is one thousand two hundred and eighty-five (1,285); but it is evident from the Superintendent's Report that some members of his establishment far exceed others in the amount of work they perform. This is owing, in some measure, to their relative efficiency and capability of correctly performing their duties, but also, and chiefly, to the particular locality in which they were placed. The most zealous and efficient Vaccinator in certain districts where vaccination is unknown, or where strong prejudices are raised against it, cannot show so large an amount of work as a less efficient servant in a more civilized part of the country. This has attracted the notice of the Superintendent, who, from data very carefully collected, and from comparison of the different Zillah Returns, as well as from his own personal observation, has devised means to check, as much as possible, this grave evil. He has changed the different members of his staff, and allotted them to other Collectorates. There is no doubt the older and most trustworthy Vaccinators should be selected whenever pioneers in a district are required, and that this important duty should not be entrusted to the newer, or the less experienced members.

Reason why Numbers cannot always be equal from each Vaccinator.

Cost of Vaccination.

37. The average expense of every one hundred (100) persons vaccinated is Rupees twelve and seven pies (12-0-7), which corresponds very nearly with last year's rate.

Obstacles to Vaccination.

38. The Superintendent enumerates, amongst the causes which retard vaccination, the unavoidable and necessary changes occasioned by the retirements, dismissals, and deaths of members of the establishment. He also states that "the want of peons has been occasionally felt, although the

Collectors have usually been considerate in acceding to my request when necessity has obliged me to apply for such aid."

Same subject.

39. The want of interest on the part of the heads of villages, and the general apathy of the Native population, he also considers causes of retardation.

Remedy suggested.

40. With respect to the want of interest on the part of heads of villages, he suggests that a circular from the Collector, expressive of his wish that the village authorities should afford their aid and countenance to the Vaccinator, would be advantageous. He mentions, that in some instances the villagers are assured "that they can follow their own inclinations in the matter." He adds—"In the Arrawud Purgunna of the Thalneir Talooka, Khandeish, where vaccination had not been previously introduced, some difficulty was at first experienced, but the prompt assistance of Mr. Mansfield soon smoothed the way for the Vaccinator."

Tours of the Superintendent, and Results.

41. The Superintendent visited and inspected the work of all the Vaccinators but three : 7 in the Ahmednuggur Zillah, 3 in the Poona Zillah, and 4 in Khandeish, and states—"I am satisfied the duty has been faithfully and correctly performed." "With regard to prejudices against vaccination, I have had none brought to my notice in either of the Collectorates, and I firmly believe that none of a serious or fixed kind exists. In some parts of my Division I have collected, in conversation with the Natives, that by some vaccination is viewed as presumptuous interference of man with the dispensations of his Creator, but this feeling readily yields to a little common-sense reasoning, and cannot be looked upon in the light of a grave obstacle. The indolence and apathy of the Native character, combined with a thorough want of appreciation of the benefits conferred by vaccination, are sufficient impediments requiring for their removal all the energy and watchfulness of this department."

Months of greatest and least Success.

42. By Table No. 5 it will be observed the highest ratio of successful vaccination occurs in November, December, January, February, and March, and that it is lowest in April, May, and October. Bearing upon this point, the Superintendent remarks:—"I have not observed that variety of season modifies the disease when immediate vaccination is practised, but I have little doubt that the virus undergoes decomposition sooner in the hot season than at any other period. Indeed at all periods of the year the virus in India appears soon to loose its activity after its removal from the vesicle, which renders any other method than *direct* vaccination uncertain and unsatisfactory.

Effect of Season and Climate on Vaccine Virus.

43. "Small-pox has been epidemic during the hot months throughout the whole of my Division, but it has been by no means very prevalent, and from all I hear the visitations have been unusually mild and short."

Small-pox.

SOUTHERN DECCAN DIVISION.

44. The *Southern Deccan Division* was commenced in November 1853. It comprehends the Collectorates of Belgaum, Dharwar, and Sholapore, the territories of Sattara, Kolapore, and of the several Chieftains of Sattara and the Southern Mahratta Country.

Size, Extent, &c.

45. During the five months of last year that vaccination was practised in this Division, ten thousand eight hundred and thirty-six (10,836) persons were vaccinated. In the year under review, the number has increased to nineteen thousand seven hundred and fifty-three (19,753), being an excess over the former period of eight thousand nine hundred and seventeen (8,917).

Number Vaccinated.

46. The formation of this Division has led to a considerable diminution, as might have been expected, in the number vaccinated in the immediate neighbourhood of the towns comprised in it; and thus, although stated in para. 10 (page 2) that twenty thousand nine hundred and ninety-eight (20,998) more persons have been vaccinated, in consequence partly of the establishment of this Division, yet the diminished numbers shown in Table 2, viz. six thousand one hundred and thirteen (6,113), and referred to in para. 85, should be deducted.

Effect of the Establishment of this Division.

47. The Division has a complete staff of Vaccinators, eighteen in number, having the same rank and pay as in the Divisions just noticed.

Establishment, Pay, &c.

48. Of the total number vaccinated there were eleven thousand four hundred and sixty-eight (11,468) males, and eight thousand two hundred and eighty-five (8,285) females; and arranged into castes, there were Hindoos seventeen thousand nine hundred and seven (17,907); Mussulmans one thousand seven hundred and seventy-nine (1,779); and Christians sixty-seven (67).

Number Vaccinated, according to Sex and Caste.

49. Of the operations performed, there were eighteen thousand one hundred and thirty-seven (18,137), or nearly 92 (91·8) per cent. successful, four hundred and twenty-two (422) unsuccessful, and one thousand one hundred and ninety-four (1,194) doubtful. The average number performed by each Vaccinator is one thousand and ninety-seven (1,097), and the average expense of vaccinating

Result.

Work of each Vaccinator, and its Cost.

one hundred (100) persons is Rupees fourteen, one anna, and six pies. (14-1-6.) The month in which the largest number of vaccinations was performed was May, and the smallest July. The month in which the greatest per-centage of successful vaccinations occur is in June, when 98·3 per cent. is recorded.

Annual Report of the Superintendent.

50. The Superintendent (Mr. Maitland) writes :—" Vaccination has been steadily carried on in all the Zillahs of the Southern Deccan Division." " In the Sholapore District, owing to illness and death of some of the establishment, progress was retarded. With two exceptions, no very decided opposition has been manifested towards its propagation."

Tours of the Superintendent, and their Results.

51. The Superintendent visited and inspected thirteen Vaccinators, " scattered over a tract of country one hundred and ninety (190) miles in extent," and endeavoured to see every child " that had been reported by the Vaccinator successfully vaccinated." He states " that strict personal supervision is the only means to ensure accuracy of Returns" ; that, with the large district to be gone over, it is impossible to visit all members of the establishment during one season. He states that the new rules work well, as far as they are a check upon making false Returns of the *total* number vaccinated, but that they can afford no assistance to determine how many of these have been performed *with success*, or whether those reported successfully vaccinated are in reality properly protected.

Presence of Epidemic Diseases, and their effects.

52. The Superintendent reports that " small-pox was very prevalent during the hot season," as well as also cholera ; and that the latter disease paralysed the efforts of Vaccinators to extend vaccination, as was most desirable during the invasion of small-pox. Only in one instance was it reported to him that inoculation was attempted to be practised, which, when " brought to the notice of the Magistrate of Sattara, was immediately suppressed."

Inoculation, practice of.

Obstacles to the spread of Vaccination, with suggestions respecting their removal.

53. He mentions that although the advantages of vaccination " have been strenuously advocated by the Civil Authorities," yet " that the people generally are not alive to its vital importance" ; that it is much opposed by the richer inhabitants of large towns, and that it is the lower classes and most illiterate Natives who voluntarily come forward. He suggests that some mild coercive measures might be advantageously adopted, and alludes to the non-entertainment of any persons in Government employ who have not undoubted marks or proofs of vaccination.

Western Division of Guzerat.

54. The *Western Division of Guzerat* comprises the whole of Kattywar to the extreme Northern Frontier, together with the districts lying to the west and north-west of the Mahee River, but not the Collectorate of Kaira or the territories subject to the Nuwab of Cambay, which are attached to the other Division (the Eastern Division of Guzerat).

Size, Extent, &c.

55. This is the largest of all the vaccinating Divisions, and has a staff of twenty-three Vaccinators, comprising one Head Vaccinator, two First Assistants, sixteen Assistants, and four Apprentices. The Division was much extended last year, and the province of Kattywar, which was chiefly, as far as regards vaccination, under the charge of the Civil Surgeon, Rajkote, has now been added.

Establishment, &c.

56. The total number of persons vaccinated was forty thousand six hundred and twenty (40,620), being an increase of nine thousand two hundred and eighteen (9,218) over last year, doubtless in part due to the cause just mentioned. The Superintendent adds:—"This increase is to be attributed to the augmentation made in the establishment in 1853, and to the Vaccinators then employed having had time to become more thoroughly acquainted with their duty."

Number Vaccinated.

Cause of Increase.

57. Of the total number vaccinated there were twenty-one thousand nine hundred and thirty-seven (21,937) males, and one thousand eight hundred and sixty-eight (1,868) females, about 54·5 per cent. of the former, and 45·5 per cent. of the latter. There were thirty-seven thousand and sixty-five (37,065) Hindoos, three thousand five hundred and fifty-three (3,553) Mussulmans, and two (2) Christians. The successful cases were thirty-two thousand and six hundred (32,600), about 80·2 per cent.; the failures amounted to two thousand and ninety-one (2,091), and those of doubtful effect to five thousand nine hundred and twenty-nine (5,929).

Sex.

Caste.

Result.

58. This per-centage of successful cases is the lowest of any Division, but it may perhaps approach nearer the truth than the high rates given in other Divisions.

59. The average expense of vaccination per hundred is Rupees eight and ten annas (8-10-0), which is less than last year, and is the lowest of all the Divisions, with the exception of the Konkun.

Cost of Vaccination.

60. The most active period of vaccinating is in the colder months of the year, viz. in December, January, February, and March, when the numbers operated upon each month were three thousand eight hundred and twenty-four (3,824), three thousand eight hundred and forty-five (3,845), three thousand nine hundred and ninety-six (3,996), and four thousand one hundred and ninety-nine (4,199) respectively; and at this season also there is the highest per-centage of successful vaccination, viz. 83·4, 83·5, 84·8, and 83·2, whilst in no instance in this Division did the per-centage reach 80 during the hot months of April, May, June, and July.

Effect of Season on Vaccination, as to Numbers and Result.

61. The Superintendent (Dr. Mahaffy) reports that he "visited nineteen of the Vaccinators during the season, and carefully examined their work." "I found them," he says, "carrying on their duty in a satisfactory manner, their Returns correct, and their books well kept. Nine Vaccinators have been employed in the Ahmedabad Collectorate, in charge of the different Purgunnas. They have been successful in their operations, and have met with no opposition or obstruction in the discharge of their duty. The assistance afforded by the Civil Authorities has been of great use, and will be still more so now that Government has issued such strict orders on the subject. As yet the Patells of villages do not seem to be fully aware of their responsibility, and sign the Return, Appendix Form No. 6, without understanding its object or meaning; but this is not to be wondered at, as many of them are unable to read, and are obliged to have recourse to the village Bunnias to read and sign their names to all papers. The Tulatees are generally absent in the cold season either in attendance on the Mamlutdar or elsewhere." "No cases of small-pox have been reported in the Collectorate during the year, and since the closing of the monsoon it has been free from epidemic disease." "In Kattywar eight Government Vaccinators have been employed during the past year. I visited the districts where three of them have been engaged, and have had much reason to be satisfied with the result of their labour. I had no difficulty in getting the children collected, for the purpose of ascertaining the correctness of the Vaccination Returns; and the people invariably told me that their fear of vaccination had ceased, and that in future they would make no objection to the Vaccinators visiting their villages."

Tours of the Superintendent, and Results.

Extracts from Annual Report.

"The Political Authorities have afforded the Vaccinators every assistance, and it is absolutely requisite they should continue to do so, as the Chiefs are still very lukewarm, and unwilling to put themselves to any inconvenience in affording assistance to the Vaccinators."

Eastern Division of Guzerat.

62. The *Eastern Division of Guzerat* comprises the Kaira Collectorate, the Nuwab of Cambay's territories, and the whole tract of country from the Mahee river to Damaun.

Size, Extent, &c.

63. The vaccinating establishment consists of one Head Vaccinator, two First Assistants, ten Assistants, and four Apprentices, at the ordinary rate of pay.

Staff of Native Vaccinators.

64. The total number of operations performed was ten thousand five hundred and fourteen (10,514), which is a decrease of one thousand four hundred and sixty-two (1,462) from last year. The Superintendent (Dr. Peach) accounts for this falling off chiefly by the sickness of his establishment. He says—"The season immediately following the monsoon was unusually unhealthy, and several of the Vaccinators suffered severely from fever, and were obliged to suspend work for a time." He also mentions as another cause the inexperience of several of the new establishment, and on this subject writes:—"When the establishment comes into good working order, and the younger and newly appointed Vaccinators have acquired experience, and with it confidence, there is every reason to hope that the Returns will be proportionally increased." Another reason assigned is that vaccination was almost entirely confined to those districts "where the inhabitants had been heretofore inimical to vaccination."

Number of Vaccinations.

Causes of Decrease.

65. The total number included ten thousand five hundred and fourteen (10,514) males, and seven thousand six hundred and forty-seven (7,647) females; whilst of castes there were sixteen thousand three hundred and ninety-five (16,395) Hindoos, one thousand seven hundred and twenty-six (1,726) Mussulmans, eight (8) Christians, and thirty-two (32) Parsees. The successful cases were fifteen thousand seven hundred and eighty-one (15,781), and the unsuccessful and those of doubtful issue were one thousand one hundred and eighty-one (1,181) and one thousand one hundred and ninety-nine (1,199) respectively. The average per-centage of success was nearly 87.

Sex.

Caste.

Result.

66. In the cold months, as observed in other Divisions, the per-centage of successful cases was higher, and reaches in February to 90 per cent., and in this month also the total number of vaccinations was high, and averages nearly two thousand (2,000) a month, whilst during the hot and monsoon seasons the number only slightly exceeded one thousand (1,000) monthly.

Months of greatest and least Success.

67. The average number of persons vaccinated by each Vaccinator

was one thousand and sixty-eight (1,068), and the average expense of every one hundred (100) vaccinations was Rupees fourteen, eight annas, and six pies (14-8-6), exceeding by Rupees four (4) the rate which was found to prevail last year.

Cost of Vaccination.

68. The Superintendent visited the greater portion of the Division, and expected to complete the whole before the setting in of the monsoon. He states—"The lymph generally has proved good and active; it produces the characteristic vesicle, which passes though the regular stages, and arrives at maturity on the seventh or eighth day." He goes on to say—"Respecting the non-extension of vaccination amongst certain classes and castes, I have but little to add, on the present occasion, to the remarks made in the last Report. The Hindoos generally are the most ready to avail themselves of the presence of the Vaccinators, and the increase, it will be observed, has been chiefly amongst this class." "The Parsees still evince the same antipathy to the operation as heretofore, and it has been only in the smaller villages, distant from the large towns, that they have shown any desire to have their children vaccinated. In consequence, the Returns of the class, although exceeding those of last year, are still very small." "This year, for the first time, the Dhers have been returned separately,* the few vaccinated in former years having been classed with Hindoos. The Vaccinators have been strictly enjoined to use every endeavour to persuade these people to produce their children, and it is hoped that the Returns of succeeding years will show a steady increase in their numbers."

Tours of the Superintendent, and Results.

Extracts from Annual Report.

69. During the year, the Superintendent states, "Inoculation has not been reported," which he thinks due "to the check given to the Inoculators in 1853-54" before reported on, and he trusts that "in future, as vaccination gains ground, nothing more will be heard of them or their hurtful practice."

Inoculation.

70. In concluding his report, the Superintendent alludes to the withdrawal of peons, and says—"The want of them operates very strongly against a greater extension of vaccination," and urges that if no permanent establishment of this class can be kept up, "Police peons of the district in which they (the Vaccinators) are working might as heretofore be allowed."

Obstacles to Vaccination.

Sind.

71. The *Sind Division* comprises the whole of that province, Kutch, and the Thur and Parkur districts.

Size, and Extent.

* This distinction is not observed in Supplementary Table No. 1, but is preserved in Form No. 55, Appendix.

72. The establishment consists of one Head Vaccinator, two First Assistants, eight Assistants, and four Apprentices—total fifteen; being the smallest of all the vaccinating establishments, with the exception of Bombay.

Vaccinating Staff.

73. During the year twenty thousand and six hundred (20,600) persons were vaccinated, or twelve thousand five hundred and ninety-two (12,592) males, and eight thousand and eight (8,008) females, being an increase over the preceding year of five thousand five hundred and three (5,503) persons vaccinated.

Number Vaccinated.

Sex.

74. The population of Sind being for the most part Mussulman, the number of that caste vaccinated exceeds all others; thus, whilst there are five thousand one hundred and twenty-six (5,126) Hindoos, and twenty-five (25) Christians reported to have been vaccinated, the Mussulmans amount to fifteen thousand four hundred and forty-nine (15,449).

Caste.

75. Of the total number vaccinated, there were nineteen thousand and forty-six (19,046) or 92·4 "successful" cases, only three hundred and thirty-five (335) unsuccessful, and one thousand two hundred and nineteen (1,219) of doubtful result.

Result.

76. The largest number of persons vaccinated was in February, March, April and May, and the smallest in August, September and October; the highest per-centage of successful vaccination occurred, however, in the three months last mentioned, and is seen by Table No. 5 to have reached as high as 98·8 per cent.

Months of largest numbers and success.

77. The total number of vaccinations performed by each Vaccinator was one thousand three hundred and seventy-three (1,373), and the average expense of each hundred (100) persons vaccinated amounted to Rupees eleven, six annas and eight pies (11-6-8), nearly the same as last year.

Cost of Vaccination.

78. The Superintendent (Dr. Bayne) remarks, with respect to the increase in the number of persons vaccinated over former years:—"I am convinced that with the same amount of energy on the part of the Vaccinators as has been displayed during the past season, a greater increase may be looked for next year."

Extracts from Annual Report.

79. He mentions that "in some parts of Sind scarcely a child remains unvaccinated, and that the chief opposers of vaccination in Sind are wealthy Hindoos in large cities."

Extracts continued.

80. The Superintendent states that the objections urged against vaccination are that it does not ensure a *perfect* immunity from small-pox, during the prevalence of an epidemic; and further, whilst its efficacy for a time may be admitted, its permanent protective power is denied.

Topics embraced in Annual Report.

81. He doubts, moreover, whether during an epidemic of small-pox vaccination can be safely entrusted to Native Vaccinators, from the fear of the lymph becoming contaminated, which, should it unfortunately happen, would prove a serious blow to vaccination.

Same Subject.

82. The Superintendent enters into a long dissertation on these points,—puts forth some theoretical views of vaccination, and adduces many arguments and some experiments on the subject. But the Medical Board are of opinion that experiments with regard to the communicability of vaccination to adults, who either have had small-pox, or have been before vaccinated, are exceedingly prejudicial to the true interests of vaccination in this country. They will forbid a repetition of such experiments, and they cannot too strongly insist upon attention being steadily directed to the simple spread of the prophylactic in its ordinary and legitimate channels.

Same Subject.

Experiments with regard to Vaccination forbidden, as unnecessary, and highly injurious to the cause.

III. VACCINATION UNDER CIVIL SURGEONS AND OTHERS.

83. Leaving the Divisional establishments, a few remarks will be made upon vaccination as performed under the directions of the Civil Surgeons and others, according to Table No. 2.

84. It will be observed that there are thirty-four (34) Stations, but that at only twenty (20) of them is there a Native Vaccinator stationed. The pay of this Medical Subordinate is Rupees nine (9) a month, but at a few places a higher rate of pay is allowed, during the present incumbent's tenure of office. At the other stations the duty of vaccination devolves upon some member of the Hospital establishment, or upon the Medical Officer in charge.

Number of Stations and Vaccinators.

85. The total number of persons vaccinated was thirty-two thousand four hundred and fifty-nine (32,459), being a decrease by six thousand one hundred and thirteen (6,113) from last year. This is due to the circumstance before alluded to, in para. 46, page 11, that during the year the Southern Deccan has been constituted a Division, and thus the Vaccinators at Belgaum,

Number Vaccinated.

Cause of Decrease satisfactorily explained.

Dharwar, and Kolapore have limited their operations to those towns, whilst the surrounding country has been consigned to the new Division there created, and in like manner the extension of the Western Division of Guzerat has limited vaccination in Kattywar to the town of Rajkote.

Sex.

86. Of the total number there were eighteen thousand seven hundred and fifty (18,750) males, and thirteen thousand six hundred and ninety-nine (13,699) females; and distributed into castes there were twenty-two thousand six hundred and seventy-two (22,672) Hindoos, nine thousand and eighty-nine (9,089) Mussulmans, five hundred and twenty (520) Christians, sixty-four (64) Parsees, and one hundred and fourteen (114) of other castes. There were twenty-nine thousand one hundred and twenty-five (29,125), or 89·7 per cent. successful cases, one thousand four hundred and thirty-two (1,432) unsuccessful, and one thousand nine hundred and two (1,902) doubtful.

Caste.

Result.

Larger Per-centages of Success recorded than under Superintendents.

87. It is a circumstance not unworthy of notice, that greater success seems to attend vaccination when performed by Vaccinators who are *not* under the charge of Superintendents. This, which at first view appears surprising, may perhaps be explained by the more minute and rigid scrutiny to which the Returns of the establishment of the Divisional Superintendence are subjected. The highest rate of per-centage amongst the Divisional Superintendence is 94·2 per cent., whilst by Table No. 2 it is seen that under the Civil Surgeons and others it reaches as high as 100 per cent.,—a rate, it may be observed, which can scarcely be correct.

Effect of this Statement.

88. It will be the Medical Board's duty to call attention to this subject, and to endeavour to secure as accurate and trustworthy Returns from the Stations referred to in Table No. 2, as they receive from the Superintendents of vaccination alluded to in Table No. 1.

Number Vaccinated by each Vaccinator larger than under Superintendents.

89. The average number of persons vaccinated by each Vaccinator was one thousand four hundred and ninety-seven (1,497), which exceeds by one hundred and thirty-six (136) the average number performed by each Vaccinator of a Division, a difference very readily explained by the circumstance that the Vaccinator under the Civil Surgeon is located in a large town, and has the daily opportunity of vaccinating amongst the members of a large community, whilst the Vaccinators under the Superintendents are employed

amongst a scattered population, and have a portion of their time occupied in travelling from village to village.

Cost of Vaccination.

90. The average expense of the establishment amounts to Rupees nine, three annas, and two pies (9-3-2) for every hundred (100) persons vaccinated, or scarcely one and half anna per individual, which is considerably less than the amount for the same number under the Superintendents of vaccination.

Although a general decrease yet large increase in particular Towns.

91. Notwithstanding that, for the reasons before stated, there has been a decrease in the total number of persons vaccinated this year as compared with last, yet it is gratifying to find that nearly in every considerable town, not subject to the operation of the causes already alluded to, there has been a steady increase. Thus, in the Deccan Circle, Ahmednuggur, Sattara, Dhoolia, and Nassik may be mentioned; in the Northern Division, Ahmedabad, Kaira, and Broach; Kurrachee, Hydrabad, and Shikarpoor in Sind,—whilst in that province also several new localities have become centres of vaccination.

92. The special Reports which the Civil Surgeons have submitted, with an examination of Table No. 2, afford the following information.

Under the Superintending Surgeon, Presidency.

93. *Tanna.*—The Civil Surgeon (Mr. Pitman) notices a slight increase of twenty-four (24) persons vaccinated during the present as compared with the last year, but the total number is exceedingly small, one hundred and eighty-six (186), of which number one hundred and eleven (111) cases only were successful; hence the cost of vaccination at this station is raised to nearly Rupees one hundred (100) per hundred. He states that "the Vaccinator is diligent in using his best endeavours to procure children, and both Civil and Police authorities have, and are, using their best to aid my efforts in overcoming the prejudices, but as yet without effect." At *Alibagh* there were only twenty-seven (27), and at *Bandora* eighteen (18) vaccinations during the year.

Under the Superintending Surgeon Poona Division.

94. *Poona.*—The Civil Surgeon at Poona (Dr. Keith) reports that "the lymph throughout the year has been healthy, and supplies have been sent to several other stations"; that "very few cases of small-pox have occurred, and only one case came under my own observation." One thousand two hundred and fifty (1,250) vaccinations were performed.

95. *Ahmednuggur.*—Eight hundred and fifty-six (856) persons were

vaccinated, being an increase of four hundred and fifty-one (451) over last year. The Civil Surgeon (Mr. Fraser) reports "that it (the increase) was attributable to the existence of small-pox in the lines of the Native Regiment, and that at that time the people cheerfully submitted their children for vaccination, both from the country and from villages around."

96. *Sattara.*—There were three thousand three hundred and fifteen (3,315) vaccinations performed, an increase of six hundred and eighty-three (683) over the last year. The Civil Surgeon (Dr. Wiehe) states:—"Altogether the results of vaccination during the last year have been very satisfactory, and the disposition shown by parents to avail themselves of the protective influence of vaccination is rather on the increase than otherwise. The Returns are tested in the usual way, by the Police Officer, and no suspicions are entertained of their being anything but genuine. The lymph in use has been healthy, and frequent supplies have been forwarded to Officers requiring such. The operations have been confined to the town of Sattara and immediate neighbourhood; beyond this being within the superintendence of the Vaccinator in charge of such duties in the Deccan and Southern Mahratta Country."

97. *Dhoolia.*—The total number vaccinated was one thousand and ninety-two (1,092), or seven hundred and seventy-seven (777) more than last year. The Civil Surgeon (Mr. Faithful) states that "this number includes all the charges under the Civil Surgeon, even a detachment of military, and prisoners, in addition to the Native town of Dhoolia and its suburbs." Of the Assistant Vaccinator's zeal, capacity, and steadiness, he speaks in terms of commendation. The lymph is "admirable, and has not once failed; and the prophylactic is on the whole more generally and readily availed by all class of Natives."

98. *Nassik.*—The Civil Surgeon (Mr. Pelly) states:—"Vaccination has been practised with a fair amount of success in the hospital, town, and throughout the Talooka of Nassik. The total number of persons vaccinated during the year was one thousand one hundred and ninety-two (1,192), or four hundred and forty-three (443) in excess of last year. The lymph is very good, and the supply has been well kept up (with the exception of a few days,) throughout the year. All the villages in the neighbourhood are constantly visited, but it is very difficult to get the Natives to allow their children to be vaccinated."

99. *Mahableshwur.*—The number vaccinated was fifty-eight (58). The Medical Officer (Dr. Winchester) writes:—"The very heavy rain in October, November, and December, prevented the vaccine virus from being active, consequently vaccination was kept in abeyance. The new Detachment [of a Native Regiment] on its arrival had none amongst

them who had not been vaccinated, and though every effort was made to get children and others to present themselves, few did so. Beyond the Bazar of Malcolm Peth, there are few villages in the vicinity, and these are so far distant and scattered, that the [hospital] establishment cannot go to them, and the Natives, unless by force, cannot be induced to bring their children to a public hospital. Hence, when one or two children have been successfully vaccinated, from want of population the virus becomes extinct, and thus I have had at least ten or fifteen supplies of lymph from the Civil Hospital at Sattara—indeed almost whenever any child is required to be vaccinated."

UNDER THE SUPERINTENDING SURGEON NORTHERN DIVISION.

100. *Ahmedabad.*—The total number vaccinated was three thousand two hundred and thirty-nine (3,239), being three hundred and one (301) in excess of last year. This is a large number, and reflects credit upon the Native Vaccinator, and upon the Civil Surgeon (Mr. Larkins), who remarks,—"Vaccination has been successfully prosecuted in the city." The Native Vaccinator, however, it should be remembered, is of a higher grade than others at Civil Stations.

101. *Kaira.*—The Civil Surgeon (Mr. Young) reports that "Vaccination has been sedulously and steadily carried on in the town, camp, and surrounding Collectorates, by the Native Assistant Vaccinator." It will be seen by the Table that there has been an increase over the past year of three hundred and sixty-two (362); the total number vaccinated being nine hundred and seventy-two (972).

102. *Rajkote*, *Surat*, and *Broach.*—No special remarks have been made by the Civil Surgeons of these Stations, but at *Rajkote* two thousand and sixty-six (2,066) persons were vaccinated, a decrease before explained in para. 85, page 18; at *Surat* one thousand one hundred and four (1,104); and at *Broach* one thousand two hundred and eighty-eight (1,288).

UNDER THE SUPERINTENDING SURGEON SOUTHERN DIVISION.

103. The decrease in the numbers vaccinated at *Belgaum*, *Dharwar*, and *Kolapore* arises from the establishment of the Southern Deccan Division before alluded to, para. 46, page 11.

104. *Belgaum.*—In this manner the Civil and Staff Surgeon of Belgaum (Mr. Waller) accounts for the diminution, as well as also from the withdrawal of the peon. He says—"Where the inhabitants are apathetic, or averse to vaccination, the difficulty of procuring subjects is increased by the removal of the Vaccinator's peon." Nevertheless one thousand one hundred and fourteen (1,114) vaccinations were performed during the year.

105. *Dharwar.*—It will be observed that here the diminution is considerable from the same causes. The Civil Surgeon (Mr. Forbes) states :—"Vaccination continues to be favourably received by the inhabitants. During the whole year the vaccine virus has continued vigorous, and in good condition." There were one thousand nine hundred and seventy-one (1,971) persons vaccinated, the successful cases being reported to be about 94·6 per cent.

106. *Sholapore.*—The total number vaccinated is eight hundred and ninty-nine (899), being a slight excess over last year. The Civil Surgeon (Dr. Sylvester) states "that the supply of lymph has been abundant throughout the year, and of good quality. The number vaccinated are, however, few compared to the population of Sholapore."

107. *Kolapore.*—The Civil Surgeon (Mr. Broughton) reports that his vaccinating operations, owing to the districts being now under the newly created Division, are confined to "the city and the circle of villages in its neighbourhood (of Kolapore), extending over an area, the radius of which is about seven miles." Out of a population of about forty-three thousand (43,000) persons, two thousand two hundred and forty-two (2,242) were vaccinated during the year, the ratio of successful cases being about 90 per cent.

108. *Rutnagherry.*—The number of vaccinations at this Station were increased by fifty (50) during the past year. The Civil Surgeon (Dr. deCrespigney describes the apathy and indifference of the people to vaccination, but adds—"Small-pox having made its appearance in the Zillah, the Natives were willing enough to be vaccinated." Few Natives, he states, "seem to understand that there is any essential difference between inoculation and vaccination." He examined all the prisoners in the Rutnagherry Jail, to see if they were either vaccinated or inoculated, and gives some curious facts regarding inoculation. The Chinese prisoners inform him that the infection is received in China by having the virus blown up the nose through a small bamboo, the Malay prisoners, and those on the Sea Coast, he found were inoculated upon the shoulder, the Konkun prisoners on the fore-arm, at the bend of the elbow, and the Guzerat ones at the wrist.

Under the Superintending Surgeon, Sind.

109. *Kurrachee.*—It will be observed by the Table that there is a very considerable increase at Kurrachee, Hydrabad, and Shikarpoor. The Civil Surgeon at Kurrachee (Mr. Beatty) reports favourably upon the vaccine matter employed by him, and which he states he supplies to other Stations :—"The continued perfection may, I think, be attributed to the small quantity of rain which falls at Kurrachee, the lymph thereby never becoming decomposed by damp, but retains its active properties."

The total number of persons vaccinated was one thousand three hundred and sixty-seven (1,367).

110. *Hydrabad.*—No special report has been received, but the numbers show a very large increase over the former year, as one thousand eight hundred and thirty-five (1,835); the total number vaccinated being two thousand five hundred and nine (2,509).

111. *Shikarpoor.*—There was also a very considerable increase, viz. one thousand three hundred and forty-one (1,341), and the Civil Surgeon (Dr. Imlach) states:—"The Return speaks for itself, and I think requires no special notice beyond that the numbers indicated have not all belonged to the town of Shikarpoor. The Native Vaccinator was instructed that it behoved him to vaccinate wherever children were to be found, and consequently at times he would visit villages near at hand, or when perchance he spied a colony of the gipsy tribes of these parts, he never spared any trouble till he got hold of all the children available. He had instructions to give medicines to all parties he met with, who stood in need of the same, and thus he became acquainted with, and generally succeeded in inducing them to submit their children for vaccination."

IV. VACCINATION UNDER NATIVE CHIEFS' AGENCY.

112. Table No. 3 shows the assistance afforded by the Native Chiefs in disseminating vaccination.

Old and New Stations.

113. Several of the Stations under the Native Chiefs have been in existence for some years, but in the Rewa Kanta, Peint, and Sawunt Warree States, operations have only commenced this year.

Number Vaccinated. Sex. Caste. Result.

114. The total number vaccinated by the agency of the Native Chiefs is thirty-five thousand one hundred and seven (35,107), or nineteen thousand one hundred and thirty-eight (19,138) males, and fifteen thousand nine hundred and sixty-nine (15,969) females. Of these thirty-two thousand six hundred and fourteen (32,614) were Hindoos, two thousand three hundred and fifty-seven (2,357) Mussulmans, and one hundred and thirty-six (136) Christians; whilst, as regards success, there were twenty-nine thousand four hundred and sixty-four (29,464) successful, two thousand two hundred and twenty-five (2,225) unsuccessful, and three thousand four hundred and eighteen (3,418) doubtful, the average of successful cases being 83·9 per cent.

115. With respect to that portion under the supervision of the Superintendent of the Southern Deccan Division, Mr. Maitland writes:—"There are at present nine Vaccinators attached to this Division: three of them are employed by the Sattara Chiefs, four in the Kolapore State, one by the Rajah of Ukulkote, and one by the Koorundwar Chief. The total number of persons vaccinated by the Native Vaccinators entertained by the different Chiefs in the Southern Mahratta Country is six thousand nine hundred and thirty-two (6,932): of these five thousand seven hundred and seventy-one (5,771) were successfully operated on, eight hundred and forty-six (846) were not seen after the operation, and the remainder are cases in which the operation failed. Although the amount of work performed by these men, as compared with Government Vaccinators, is small, yet the numbers successfully vaccinated is greater than in previous years. The Vaccinators in the Sattara districts in particular were formerly in the habit of sending in Returns, only half or sometimes two-thirds of which consisted of subjects not seen after vaccination, or cases in which the operation had failed." "The present Return, I regret to say, is very far, in point of numbers, from what it ought to be; and the reasons for this unsatisfactory state of things must be ascribed, as I have stated in former Reports, to the absence of anything like an interest felt by the Jageerdars themselves in the cause of vaccination, and the little support or encouragement either they or their Karbarees hold out to the Vaccinators in the prosecution of their labours. Some Chiefs, indeed, exhibit such lukewarmness on the subject, that vaccination may be said to be but barely tolerated within their districts. Formal orders are certainly issued by them to their Native subordinates, at the instance of Political Agents, but anything like a hearty co-operation in the matter is very rarely exhibited.

In the Southern Deccan Division.

Mr. Maitland's Report.

"Under such a state of things it is not surprising that Vaccinators are called upon to meet much hostility, and experience difficulty in obtaining subjects for vaccination; and so great is the opposition found to be in some parts, that it is almost impossible for any length of time to keep up the supply of healthy lymph.

"The Chiefs, I am happy to report, have now all consented to place their Vaccinators under the control of the Divisional Superintendent, and signified their intention to allow vaccination to be carried on exactly in the same manner as is laid down in the new Rules; so that it is hoped that by care and vigilance on the part of the Superintendent matters will soon improve, and that ere long he will be enabled to report that the branch of Jageerdar Vaccinators are as efficient as the Government.

" Inoculation has not retarded or interfered with the progress of vaccination during the past year. An Inoculator in the month of December commenced to work in the District of Inchul Kurunjee, but he was immediately suppressed by order of the Political Superintendent of Kolapore."

116. The Superintendent of the Western Division of Guzerat (Dr. Mahaffy) reports :—" The progress of vaccination in the Myhee Kanta, and in the Districts under the Political Superintendent at Pahlunpore, has been satisfactory during the past year. Four Vaccinators have been added to the establishment, and the number of vaccine operations performed has amounted to thirteen thousand two hundred and five (13,205) : this is an increase of five thousand seven hundred and fifty-three (5,753) on the operations of the previous year. The establishment employed by Native Chiefs has now been carrying on operations for six years, and has performed during that period forty-seven thousand one hundred and forty (47,140) operations.

In the Western Division of Guzerat.

" A good deal of opposition has been experienced in extending vaccination into the wilder Districts on the Frontier, particularly in the Rhadunpore State, and in the Daunta Talooka of the Myhee Kanta ; but I am glad to be able to say that as the people are becoming acquainted with the Vaccinators, it is gradually subsiding, and will, I trust, in time altogether cease. It is not to be expected that the Koolee inhabitants of these Districts will take readily to vaccination, or that it will ever be carried on with the same facility amongst them as in the more civilized districts of the Division.

Dr. Mahaffy's Report.

" For the Kattywar Province seven Vaccinators have been instructed, and are now about to proceed into the Districts of the Chiefs who have agreed to keep them up ; and the Political Agent informs me that he hopes in time to be able to make arrangements with the other Chiefs for the support of Vaccinators. This is most desirable, as the Government establishment is unequal to the duty."

117. The Superintendent of the Eastern Division of Guzerat (Dr. Peach) states :—" The Gaekwar of Baroda has continued to employ four Vaccinators, and these being experienced men, vaccination has progressed favourably in his territories, and apparently has been well received by his subjects. In the Rewa Kanta, through the exertions of the Political Agent, vaccination has been established during the past year. Two Vaccinators have been employed in that part of the Division since the month of November 1854, and I understand that a considerable increase to the number is contemplated."

In the Eastern Division of Guzerat.

Dr. Peach's Report.

118. The Civil Surgeon Nassik writes with respect to Peint :—

The Peint State.

"During the last few months vaccination has been introduced into the independent State of Peint. From the ignorance of the inhabitants, who had never seen anything of the kind before, and who were fearful as to the results which might be produced, considerable opposition was experienced at first. On my sending out a child from Nassik, with the vesicle fully formed, and their seeing that the child suffered no injury, many of the inhabitants at once consented to submit their children to the operation, and as the Mamlutdar, a very intelligent man, is exerting his influence to persuade those who still hesitate, considerable success may ere long be expected."

Mr. Pelly's Report.

119. It is to be observed that in this independent State, the number of *female* children vaccinated is in excess of males, an occurrence which does not happen elsewhere in India, although the same circumstance is noticed in the Returns from the Residency in the Persian Gulf.

120. *Sawunt Warree.*—Under Sub-Assistant Surgeon Spencer the number vaccinated was five thousand and eighty-eight (5,088), which is ascribed "to the exertions of the Native Vaccinator, as well as to the willingness of the people in submitting their children to the process of vaccination."

The Sawunt Warree State.

V. VACCINATION UNDER REGIMENTAL MEDICAL OFFICERS.

121. Table No. 4 shows the amount of vaccination performed by Regimental Medical Officers, classified according to whether the men, women, and children, belonged to European and Native Regiments, or to their followers.

122. The total number vaccinated amounts to three thousand eight hundred and twenty-three (3,823), of which number two thousand nine hundred and twenty (2,920), or 76 per cent. were successful. Of the total number there were three hundred and ninety-three (393) men, forty-three (43) women, and three thousand three hundred and eighty-seven (3,387) children, the latter forming by far the largest proportion.

Number Vaccinated.

Result.

Sex.

123. The three hundred and thirty-six (336) sepoys therein mentioned were chiefly *Recruits* of the Native Army, who, agreeably to Art. 30, Sect. VI. of the Medical Regulations, are directed to be vaccinated on enlistment, if there are no distinct marks of the operation having been previously performed.

Vaccination of Recruits.

124. The data upon which this Table is founded do not admit of any classification into castes, or a distribution into months, consequently Tables Nos. 5 and 6 are deficient in these particulars.

VI. MONTHLY ABSTRACTS OF VACCINATION.

Table No. 5.

125. Table No. 5 is interesting as showing the monthly rate of vaccination performed by each Divisional Superintendent, by the Civil Surgeons, and through the agency of the Native Chiefs. By the Abstract at the foot it will be seen that the averages for the months between December and June, and between June and December, are respectively very much above and below the general monthly average.

Monthly Average.

126. The average number of persons vaccinated in each month, taking the whole year together, is nineteen thousand one hundred and twenty-nine (19,129), but for the six months between December and June it is as high as twenty-one thousand seven hundred and thirty-two (21,732), and between June and December as low as sixteen thousand four hundred and seventy-nine (16,479). The same proportion, it will be observed, is pretty nearly maintained in Tables Nos. 1, 2, and 3, and has been before alluded to (*ante* paras. 17 and 18).

Largest Number, and highest per-centage of Success.

127. The months in which the largest number of vaccinations is performed are in the following order: January, February, March, May, April, December, November, June, October, July, September, and August; and the highest per-centage of success,—February, November, December, January, August, March, October, June, September, May, July, and April.

The Cold Season most favourable for Vaccination.

128. It was stated in para. 44 of last year's Report, that in the colder months of the year vaccination was more actively pursued, and with greater success, than at other periods—a statement which the Tables and foregoing observations now confirm.

When Small-pox prevails Vaccination should be vigorously pursued.

129. It is towards the close of the cold season that small-pox is most prevalent, and it is at this time (independent of all other considerations) that vaccination should be vigorously and steadily pursued. It has been before mentioned that when small-pox exists, there is a possibility of the vaccine lymph becoming contaminated, but where proper precautions are used this cause of fear and distrust should not, the Medical Board are convinced, be allowed to

interfere with the practice of vaccination; but rather, the prevalence of small-pox should be a stimulus to increased exertions, and to a determination to extend the prophylactic by all legitimate means.

VII. VACCINATION ACCORDING TO SEX, CASTE, AND RESULT.

130. Table No. 6 may now be examined, with regard to the monthly vaccinations, as respects sex, caste, and results; but it does not call for any special remark, further than that the sexes of children, arranged according to the castes of their parents, give the following results:—

	Males.	Females.
Hindoos	1,03,965, or 54·6 per cent.	86,388, or 45·3 per cent.
Mussulmans ..	22,489, or 60·6 per cent.	14,562, or 39·3 per cent.
Christians	1077, or 62·7 per cent.	640, or 37.2 per cent.
Parsees	173, or 63·3 per cent.	100, or 36·6 per cent.
Other Castes ..	85, or 56·2 per cent.	66, or 43·7 per cent.

VIII. GENERAL ABSTRACT OF VACCINATION FROM PRECEDING TABLES.

131. Table No. 7 presents a condensed Abstract of Tables Nos. 1, 2, 3 and 4. It shows that the total number vaccinated is two hundred and thirty-three thousand three hundred and sixty-eight (233,368), of which one hundred and sixty-one thousand nine hundred and seventy-nine (161,979) were performed by the Divisional Superintendents, thirty-two thousand four hundred and fifty-nine (32,459) by the Civil Surgeons and others, thirty-five thousand one hundred and seven (35,107) by the agency of the Native Chiefs, and three thousand eight hundred and twenty-three (3,823) by Regimental Medical Officers.

Number Vaccinated.

132. It will be seen that although there is a decrease in Table No. 2 of six thousand one hundred and thirteen (6,113), yet that Table No. 1 exhibits an increase of twenty thousand nine hundred and ninety-eight (20,998); Table No. 2 of twelve thousand and seventy-three (12,073); and Table No. 4 of three hundred (300); or altogether a positive increase over last year of

Total actual Increase over last year.

twenty-seven thousand two hundred and fifty-eight (27,258) persons vaccinated.

133. From the same Table (No.7) it is seen that the proportion of sexes is somewhat in favour of the male: thus out of the total number given in paras. 8 and 15 there are one hundred and twenty-seven thousand seven hundred and eight-nine (127,789) males, and one hundred and one thousand seven hundred and fifty-six (101,756) females, that is a preponderance of twenty-six thousand and thirty-three (26,033) boys above girls operated upon during the past year, or about 55·6 per cent. of males and 44·3 of females.

The Male Sex preponderates.

134. This proportion in the relative number of the sexes agrees very nearly with the registrations of births in Bombay, according to Dr. Leith's Returns, from which it appears that the males exceed the females in the proportion of 123 to 100, or about 55·6 per cent.

The same is seen in Birth Registrations.

135. It may be again mentioned as a singular fact, that there are only two places where the number of females vaccinated is greater than males: of these one is out of India, in the Persian Gulf, and the other at the station of Peint, near Nassik, in the territories of a Native Chief.

Exceptions.

136. The nearest approach to an equality of sexes (amongst numbers above a thousand) occurs at Sawunt Warree, where there were two thousand five hundred and seventy-one (2,571) males, and two thousand five hundred and seventeen (2,517) females vaccinated.

Where Sexes nearly equal.

137. With respect to castes, it will be seen that the number of Hindoo children vaccinated amounted to one hundred and ninety thousand three hundred and fifty-three (190,353), or about 83 per cent.; Mussulmans thirty-seven thousand and fifty-one (37,051), or 16·1 per cent.; Christians one thousand seven hundred and seventeen (1,717), or 0·7 per cent.; Parsees only two hundred and seventy-three (273), or 0·1 per cent.; and other castes one hundred and fifty-one (151) or 0·06 per cent.

The Hindoo Caste preponderates.

138. This proportion is scarcely, however, in accordance with the relative numbers of the population of Western India. The small proportion of Parsees vaccinated compared to the number of that class (inhabitants of Bombay and Surat) is remarkable. It may hence, perhaps, be inferred, that they employ other than the Government Vaccinators. In occasional instances this may be so, but were the numbers thus operated upon at all large, the circumstance would become known to the Government Vaccinators, who alone keep up the supply of lymph, and any considerable

Not in accordance with Statistics of Population.

Reason why Vaccination cannot to any extent be performed clandestinely.

demands for it must necessarily be brought to their notice. It cannot, therefore, but be a matter of regret that the Parsees do not appreciate vaccination to that degree which, from their long familiarity with its practice, and their general intelligence, might have been expected.

Indifference to Vaccination.

139. The same neglect of the practice is not exhibited by any other caste, although it is mentioned that in Sind and in some other places the richer and higher classes of Hindoos are disinclined to receive vaccination.

Result.

140. In regard to the result of vaccination, it appears by Table No. 7, that out of two hundred and thirty-three thousand three hundred and sixty-eight (233,368) persons vaccinated, two hundred and five thousand four hundred and fifty-five (205,455) operations were performed with "*success*," that is, about in the proportion of 88 per cent., which may be considered highly satisfactory, and shows that the lymph employed must have been good, and that great care was taken in propagating the disease.

Cost of Vaccination.

141. Since the expiration of the official year, it has been notified by Government Letter, General Department, No. 2793, of the 15th September 1855, that the monthly sum granted for vaccination, inclusive of Superintendents' salary and all other charges, has been fixed at Rupees four thousand six hundred and ninety-seven and four annas (4,697-4-0). If the number of operations performed last year be computed with reference to this amount, it is found that the expense of every hundred (100) persons vaccinated is Rupees twenty-four, two annas and five pies (24-2-5), or three annas and ten pies (0-3-10) per individual. If all unsuccessful and doubtful cases are excluded, the sum is raised to Rupees twenty-seven, six annas and eleven pies (27-6-11) per hundred, or four annas and four pies (0-4-4) each individual. If also the number vaccinated by the Native Chiefs is withdrawn, then the expense to Government of every hundred (100) persons vaccinated is Rupees twenty-eight, six annas and two pies (28-6-2) per hundred, or four annas and six pies (0-4-6) for each; or by limiting the calculation only to *successful* cases, the State pays Rupees thirty-two and five pies (32-0-5) for every hundred (100) persons vaccinated, or five annas and one pie (0-5-1) for each individual.

IX. CHARACTER OF THE VACCINE MATTER.

The Vaccine Lymph is reported to be good.

142. The character of the vaccine disease propagated throughout the country has generally been good, and the virus has maintained its efficiency. In some instances it was thought to be affected by the

heat of the weather, or by the particular locality; and this was brought to notice in Sind during the hot season; but wherever the lymph was suspected to have suffered deterioration immediate steps were taken for its renewal. To this point the special attention of Superintendents is directed, and it is one on which they have been able satisfactorily to report. The fresh supply of lymph from England, alluded to in the last Annual Report, was distributed as there stated; and it is satisfactory to find by the reports of the Presidency and Konkun Superintendents that it has been successful.

X. SMALL-POX.

General Statements concerning.

143. It has been mentioned in several of the Reports of the Superintendents, before quoted, that small-pox has been present in certain districts at particular periods of the year. It is impossible to state with any accuracy the extent to which the disease has prevailed, as the information furnished cannot but be most vague. The disease is known, however, to be most prevalent in the colder months of the year,—to continue more or less throughout the hot season, and to disappear as the rains set in. As before mentioned, in para. 128, page 28, the opportunities its presence affords should not be lost sight of in stimulating the Vaccinators to increased exertions.

Accurate data made available.

144. The only trustworthy data the Medical Board possess with respect to small-pox have been tabulated in the Appendix (Table No. 8), derived from the Returns of Sick of European and Native Troops, Prisoners in Jails, Civil Hospitals, and Dispensaries.

Table No. 8, its details.

145. The information which it conveys bears little upon the prevalence of the disease throughout the country, but is more strictly professional, showing the character of the disease and its great mortality.

Same subject.

146. Amongst European Troops, small-pox was only seen in fifteen instances, and only in the Poona and Southern Divisions. Of these three died, about 18 per cent., whilst amongst Native Troops there is no Division, except Aden, in which cases of small-pox did not occur, and out of eighty-one attacked eleven died, or 13 per cent. Two cases only occurred amongst five thousand seven hundred and fifty-six (5,756) prisoners in Jails. In the Civil Hospitals one hundred and three (103) persons were under treatment, of whom twenty-nine (29) died, or about 26·3 per cent., whilst at the Dispensaries there were twenty-five (25) cases and five 5 deaths, or about 20 per cent.

147. The largest numbers are recorded at the Presidency,—a fact to be explained by the circumstance that in Bombay the large Civil Hospital, the Jamsetjee Jejeebhoy, admits all such cases, which in the Mofussil would be unknown, and unrecorded.

148. The ratio of mortality, it will be observed, is highest at Aden, next in Sind, then at the Presidency. The average rate of mortality is about 20 per cent., or one in five.

Same subject.

149. Data are wanting to show whether in the cases of deaths from small-pox any of the persons had previously been either vaccinated or inoculated; but there can be no doubt that by far the larger number were wholly unprotected.

Same subject.

150. It is gratifying to find that but few inoculations for small-pox have been brought to notice, and it is to be hoped that the occupation of the "Tikadar" is fast drawing to a close. The strict regulations on this head, and the summary punishments of the offenders, must have a beneficial tendency, in arresting the spread of inoculation.

Inoculation.

XI. CONCLUDING REMARKS.

151. It only now remains for the Medical Board briefly to allude to one or two points before adverted to.

152. On the whole they consider that there is much reason to be satisfied with the work performed during the past year under the revised system, and they cannot but think that even on the present occasion sufficient evidence has been brought forward to show that the Returns from the Superintendents are more trustworthy, that a larger tract of country is now laid open to the Vaccinators, and that the work is more frequently inspected than heretofore; but it would be premature to speak too confidently on any or all of these subjects.

The Results of last year generally satisfactory.

153. With respect to the Returns, the most serious evil to be apprehended is their falsification: whenever this has occurred, which has been rare, the guilty party has been summarily punished or dismissed. Under the present severe checks and strict scrutiny to which all the Native Returns are subject, it is believed that it is difficult to fabricate the Returns, or to falsify them in any serious manner.

Returns are with difficulty now falsified.

154. Several of the Superintendents mention that the withdrawal of the Peons has been attended with disadvantages to the efficient working of their establishments. This is doubtless true in many instances, but it was a result

Diminution in the number of Peons prejudicial.

not altogether unanticipated. It formed an essential part of the scheme now brought into operation to substitute a large staff of Vaccinators, at a sacrifice of a considerable number of Peons or messengers, and the change has not been yet sufficiently long in operation for the Medical Board to pronounce very decidedly on its merits or disadvantages. They will, however, be prepared on some future occasion to enter more fully into its consideration.

Pensions for the Superannuated.

155. And so with respect to pensions for the superannuated, there can be no doubt that many Vaccinators, who entered the Service thirty years and upwards ago, remain on merely for daily subsistence, when it would be to the advantage of the public that more active men filled their places.

Same subject.

156. During the year under review the Head Vaccinator of the Konkun Division had to be removed from sheer incapacity to perform his duties, without any pension to fall back upon; but as by letter No. 2135 of 1855, of the Secretary to Government of India, Financial Department, it appears that the subject of pensions for Uncovenanted Servants is under consideration, the Medical Board need not further allude to it.

Aeknowledgment of the Services of Divisional Superintendents, and good conduct of their Establishments.

157. The Medical Board gladly record that the Divisional Superintendents have, without exception, exhibited becoming zeal in the discharge of their duties. They also consider that the establishment has worked well during the year, and deem it right to mention that there have been but few complaints by the Superintendents of the conduct of their subordinates.

The same of Civil Surgeons, and the Subordinate Medical Establishment.

158. The several Civil Surgeons have also shown much interest in the cause, and the large number of vaccinations performed at Sattara, Ahmedabad, Kolapore, and Hydrabad, deserve especial mention; and lastly, it should not be forgotten that the members of the Subordinate Medical Establishment have also, in many instances, exhibited a praiseworthy concern. The establishment of Dispensaries has likewise been attended with an augmentation of the numbers vaccinated, although much more will hereafter be expected from the Medical Officers in charge of these institutions.

Native Chiefs have materially assisted.

159. The aid rendered to the cause of vaccination (with a few exceptions) by the Native Chiefs, during the year under review, deserves to be especially recorded. It was only towards the close of the year that the views of the Medical Board were expressed, with the concurrence of Government, that the Vaccinators employed by them should be under the same system of superintendence as the Government Vaccinators.

160. The cordial assistance furnished by the several Officers of Government to Native Vaccinators should not pass unnoticed; and if instances of neglect on this head happened, they were few, and for the most part unimportant: nevertheless, Resolution of Government No. 122 of 1855, dated 23rd March, was appropriately promulgated, and its good effects will doubtless be observable during the current year.

Also Government Officials.

I have the honour to be,

Sir,

Your most obedient Servant,

W. C. COLES., M.D., Assist. Surgeon,

Acting Secretary, Medical Board.

Bombay, Medical Board Office,
21*st February* 1856.

APPENDIX.

FORM

Return of Persons Vaccinated at this Presidency and Subordinate

STATIONS.	RANK AND NAMES.	CHRISTIANS.			
		Europeans.		Natives.	
		Male.	Female.	Male.	Female.
Presidency Division	Assistant Surgeon J. Peet	148	60	401	212
Konkun ,,	,, A. V. Ward	..	..	72	50
Northern Deccan ,,	,, W. Davey	1	..	2	4
Southern Deccan ,,	,, G. G. W. Maitland	..	..	47	20
Western Guzerat ,,	,, E. Mahaffy, M.D.	2	..	..	..
Eastern Guzerat ,,	,, W. Peach, M.D.	..	..	3	5
Sind ,,	,, R. Bayne, M.D.	17	2	4	2
Tanna	,, H. Pitman	2	..	13	3
Alibaugh	Apothecary M. Hearn	2	1	..	1
Bandora Dispensary	Sub-Asst. Surgeon N. Shamrow	..	..	7	7
Poona	Assistant Surgeon J. Keith, M.D	57	32	22	22
Ahmednuggur	,, J. G. Fraser	4	3	10	12
Sattara	,, C. G. Wiehe, M.D.	3	4	5	3
Dhoolia	,, J. J. Faithful	1	1	4	3
Nassick	,, S. M. Pelly	2	..	8	7
Mahableshwur	Surgeon J. Winchester, F.R.S.	3	6	..	..
Ahmedabad	,, T. B. Larkins, F.R.S.	5	3	3	2
Kaira	Assistant Surgeon T. Young	..	..	..	..
Rajkote	,, W. F. Clay	..	..	..	2
Surat	,, H. P. Lawrence	..	..	..	4
Broach	,, J. Bean	..	..	..	..
Bhooj Dispensary	Sub-Asst. Surgeon S. Hemraj	1	..	..	..
Belgaum	Surgeon T. Waller	28	22	45	26
Dharwar	,, G. F. Forbes	1	1	1	..
Sholapore	Assistant Surgeon C. J. Sylvester, M.D.	..	1	..	..
Kolapore	,, F. Broughton	4	2	1	3
Rutnagherry	,, E. N. C. de Crespigney, M.D.	2	1	..	..
Vingorla	Apothecary J. Wright	..	..	18	9
Waghotun	Asst. Apothecary T. Robinson	..	..	..	..
Kurrachee	Assistant Surgeon T. B. Beatty	26	15	4	7
Hydrabad	,, J. M. Bowie	..	..	..	..
Shikarpoor	,, C. J. F. Imlach, M.D	5	..	..	..
Kurrachee Dispensary	Sub-Asst. Surgeon A. Chundroba	2	1	3	5
Larkhana	Asst. Apothecary J. French	..	..	..	..
Jerruck	First Hosp. Assist. M. Summers	..	..	..	..
Meerpoor	,, Moolla Oomer	..	..	..	..
Meerpoor Buttora	,, Gopall Jadow	..	..	..	..
Mahomed Khan's Tanda	,, J. Thompson	..	..	..	..
Mehar	Apothecary J. Wright	..	..	..	..
Aden	Surgeon D. Costelloe, M.D.	3	5	..	..
Bushire	Assistant Surgeon A. Fyfe, M.D.	6	5	..	..
Southern Deccan*	,, G. G. W. Maitland	..	..	5	3
Myhee Kanta*	,, E. Mahaffy, M.D.	..	..	..	..
Baroda*	,, W. Peach, M.D.	..	..	3	2
Rewa Kanta*	,, Ditto	..	..	..	..
Peint (Nassick)*	,, S. M. Pelly	..	..	..	..
Sawunt Warree*	Sub-Asst. Surgeon R. Spencer	..	..	71	52
Various	Regimental Medical Officers	..	..	..	..
	Total	325	174	752	466

* Native Chiefs' Establishment.

Of the above number were vaccinated .....
Re-vaccinated, but failed .....
Not seen after Vaccination .....

Bombay, Medical Board Office, 21st February 1856.

No. 55.

Stations, from the 1st April 1854 to the 31st March 1855.

Hindoos.				Mussulmans.		Jews.		Parsees.		Total of both Sexes.	Number Vaccinated during 1853-54.	Increase.	Decrease.
Hindoos.		Dhers.											
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.				
2,530	1,858	303	231	903	386	..	..	118	59	7,218	7,341	..	123
14,928	14,193	1,329	1,217	362	314	16	21	..	..	32,502	34,934	..	2,432
11,130	9,956	489	410	648	485	..	..	..	..	23,125	21,748	1,377	..
10,308	7,429	74	96	1,039	740	..	..	..	..	19,753	10,836	8,917	..
20,108	16,957	..	..	1,827	1,726	..	..	..	..	40,620	31,402	9,218	..
8,908	6,501	543	443	1,042	684	..	..	17	15	18,161	19,623	..	1,462
2,996	2,130	..	..	9,575	5,874	..	..	..	..	20,600	15,097	5,503	..
94	55	..	..	9	9	1	3	..	..	186	162	24	..
8	9	..	..	1	4	..	..	1	..	27	89	..	62
3	1	..	..	..	..	..	..	..	..	18	..	..	..
563	418	..	..	68	57	2	..	3	3	1,250	1,379	..	129
353	292	..	..	103	79	..	..	..	..	856	405	451	..
1,725	1,375	24	28	83	65	..	..	..	..	3,315	2,632	683	..
502	451	..	..	72	58	..	..	..	..	1,092	315	777	..
588	550	..	..	25	12	..	..	..	..	1,192	749	443	..
23	23	..	..	2	1	..	..	..	..	58	140	..	82
1,534	1,310	..	..	236	141	..	..	4	1	3,239	2,938	301	..
426	426	..	..	66	53	..	..	..	1	972	610	362	..
871	727	..	..	256	209	..	..	..	1	2,066	4,987	..	2,921
451	390	..	..	142	95	..	..	12	10	1,104	1,376	..	272
602	363	1	2	170	132	..	..	12	6	1,288	1,157	131	..
42	33	..	..	34	39	..	..	..	..	149	148	1	..
371	384	7	13	154	128	18	16	1	1	1,114	5,392	..	4,278
937	776	..	..	133	122	..	..	..	..	1,971	8,627	..	6,656
392	219	..	..	206	74	..	..	4	3	899	862	37	..
1,096	1,044	..	..	42	50	..	..	..	..	2,242	2,986	..	744
247	165	..	..	22	17	..	..	..	..	454	404	50	..
88	60	..	..	24	17	..	..	..	..	216	153	63	..
..	..	..	..	..	..	..	..	..	..	..	54	..	..
138	76	..	..	804	295	1	1	..	..	1,367	816	551	..
697	441	..	..	868	503	..	..	..	..	2,509	674	1,835	..
361	229	..	..	715	420	..	3	..	..	1,733	392	1,341	..
155	85	..	..	152	95	..	..	1	..	490	..	..	..
..	..	..	..	11	1	..	..	..	..	12	..	..	..
16	7	..	..	21	14	..	..	..	..	58	..	..	..
229	169	..	..	406	313	..	..	..	..	1,117	475	642	..
35	16	..	..	19	13	..	..	..	..	83	..	..	..
..	..	..	..	13	..	..	..	..	..	13	290	..	277
..	..	..	..	..	..	..	..	..	..	..	365	..	..
35	21	..	..	758	200	42	17	..	..	1,081	..	..	..
..	..	..	..	124	134	5	5	..	..	279	95	184	..
3,306	2,987	162	111	237	121	..	..	..	..	6,932	6,299	633	..
6,429	5,844	..	..	513	419	..	..	..	..	13,205	7,452	5,753	..
4,452	2,813	91	91	409	297	..	..	..	..	8,158	2,527	4,631	..
758	553	9	1	27	26	..	..	..	..	1,374	..	..	..
159	176	..	..	7	8	..	..	..	..	350	..	..	..
2,339	2,333	..	..	161	132	..	..	..	..	5,088	5,756	..	668
..	..	..	..	..	..	..	..	..	..	3,823	3,523	300	..
100,933	83,745	3,032	2,643	22,480	14,562	85	66	173	100	233,368	206,110	27,258	..

successfully 205,455
..... 9,997
..... 17,916

Grand Total.. 233,368

By order of the Medical Board,
W. C. Coles, M.D., Assistant Surgeon,
Acting Secretary, Medical Board.

TABLE

VACCINATION UNDER

Table of Divisional Vaccination, showing the Number and Names of the Divisions, and performed, and compared with those of last Year; the Total Number arranged according Number of Operations performed by each Vaccinator; the Pay of Vaccinators; and the

Number.	Divisions.	Names of the Medical Officers, Superintendents of Vaccination.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.		
					1853-54.	Increase.	Decrease.
1	Presidency	Asst. Surg. J. Peet	10	7,218	7,341	..	123
2	Konkun	„ A. V. Ward	18	32,502	34,934	..	2,432
3	Northern Deccan.	„ W. Davey	18	23,125	21,748	1,377	..
4	Southern Deccan.	„ G. G. W. Maitland..	18	19,753	10,836	8,917	..
5	Western Guzerat.	„ E. Mahaffy, M.D. ..	22	40,620	31,402	9,218	..
6	Eastern Guzerat..	„ W. Peach, M.D.....	17	18,161	19,623	..	1,462
7	Sind	„ R. Bayne, M.D.	15	20,600	15,097	5,503	..
		Total...	119	161,979	140,981	20,998	..

Rank and Pay

Establishment.	Head Vaccinator.	First Asst. Vaccinator.
Rate of Monthly Pay..Rs.	24	18
Presidency, No. of Vaccinators.	1	1
Konkun, do. ..	1	2
Northern Deccan, do. ..	1	2
Southern Deccan, do. ..	1	2
Western Guzerat, do. ..	1	2
Eastern Guzerat, do. ..	1	2
Sind, do. ..	1	2
Total..	7	13

No. 1.

SUPERINTENDENTS.

their Superintendents; the Number of Vaccinators employed; the Total Vaccinations to Sex, Caste, and Result; the Ratio of Successful to Total Vaccinated; the Average Average Cost of every Hundred Persons Vaccinated.

Total Number Vaccinated, arranged according to Sex.		Total Number Vaccinated, arranged according to Caste.					Total Number Vaccinated, arranged according to Result.			Ratio per Cent. of Successful to Number Vaccinated.	Average Number of Persons Vaccinated by each Vaccinator.	Pay of Native Vaccinators.	Average Cost of every 100 Persons Vaccinated, exclusive of the Superintendent's Pay & Allowances.		
Male.	Female.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Successful.	Unsuccessful.	Doubtful.						
												Rs.	*Rs.*	*a.*	*p.*
4,403	2,815	4,922	1,289	830	177	..	6,189	206	823	85·7	722	1,608	22	4	5
16,707	15,795	31,667	676	122	..	37	30,409	1,126	967	93·5	1,805	2,784	8	9	0
12,270	10,855	21,985	1,133	7	..	..	21,784	284	1,057	94·2	1,285	2,784	12	0	7
11,468	8,285	17,907	1,779	67	..	..	18,137	422	1,194	91·8	1,097	2,784	14	1	6
21,937	18,683	37,065	3,553	2	..	..	32,600	2,091	5,929	80·2	1,766	3,504	8	10	0
10,514	7,647	16,395	1,726	8	32	..	15,781	1,181	1,199	86·8	1,068	2,640	14	8	6
12,592	8,008	5,126	15,449	25	..	..	19,046	335	1,219	92·4	1,373	2,352	11	6	8
89,891	72,088	135,067	25,605	1,061	209	37	143,946	5,645	12,388	88·8	1,361	18,456	11	6	3

of Establishment.

Asst. Vaccinator.	Apprentice.	Total Vaccinators.	Total Amount of Monthly Pay.	Annual Payment.
12	10			
			Rs.	*Rs.*
6	2	10	134	by 12 = 1,608
14	4	18	232	by 12 = 2,784
14	4	18	232	by 12 = 2,784
14	4	18	232	by 12 = 2,784
16	4	25	292	by 12 = 3,504
10	4	17	220	by 12 = 2,640
8	4	15	196	by 12 = 2,352
73	26	119	1,538	by 12 = 18,456

VACCINATION UNDER

Table of Vaccination under Civil Surgeons and others, arranged

Number.	Superintending Surgeons' Divisions.	Civil Stations.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.		
					1853-54.	Increase.	Decrease.
1	Presidency	Tanna	*a* 1	186	162	24	..
		Alibaugh	..	27	89	..	62
		Bandora Dispensary	..	18	..	..	..
		Total..	1	231	251	..	20
2	Poona	Poona	*c* 1	1,250	1,379	...	129
		Ahmednuggur	*a* 1	856	405	451	..
		Sattara	*c* 1	3,315	2,632	683	..
		Dhoolia	*b* 1	1,092	315	777	..
		Nassick	*a* 1	1,192	749	443	..
		Mahableshwur	..	58	140	..	82
		Total..	5	7,763	5,620	2,143	..
3	Northern	Ahmedabad	*d* 1	3,239	2,938	301	..
		Kaira	*a* 1	972	610	362	..
		Rajkote	*a* 1	2,066	4,987	..	2,921
		Surat	*c* 1	1,104	1,376	..	272
		Broach	*a* 1	1,288	1,157	131	..
		Bhooj Dispensary	..	149	148	1	..
		Total..	5	8,818	11,216	..	2,398
4	Southern	Belgaum	*a* 1	1,114	5,392	..	4,278
		Dharwar	*a* 1	1,971	8,627	..	6,656
		Sholapore	*a* 1	899	862	37	..
		Kolapore	*c* 1	2,242	2,986	..	744
		Rutnagherry	*a* 1	454	404	50	..
		Vingorla	..	216	153	63	..
		Waghotun	..	..	54	..	..
		Total..	5	6,896	18,478	..	11,582
5	Sind	Kurrachee	*a* 1	1,367	816	551	..
		Hydrabad	*a* 1	2,509	674	1,835	..
		Shikarpoor	*a* 1	1,733	392	1,341	..
		Kurrachee Dispensary	..	499	..	..	..
		Larkhana	..	12	..	..	..
		Jerruck	..	58	..	..	..
		Meerpoor	..	1,117	475	642	..
		Meerpoor Buttora	..	83	..	..	..
		Mahomed Khan's Tanda	..	13	290	..	277
		Mehar	..	..	365	..	..
		Total..	3	7,391	3,012	4,379	..
6	Aden	Aden	*a* 1	1,081	..	..	..
7	Persian Gulf	Bushire	..	279	95	184	..
		Grand Total..	20	32,459	38,572	..	6,113

a At Rs. 9 per mensem. *b* At Rs. 12 per mensem.

Civil Surgeons and others.

according to Divisions, and showing the Details as in Table No. 1.

Total Number Vaccinated, arranged according to Sex.		Total Number Vaccinated, arranged according to Caste.					Total Number Vaccinated, arranged according to Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of Persons Vaccinated by each Vaccinator.	Pay of Native Vaccinators per annum.	Average Cost of every 100 Persons Vaccinated, exclusive of Medical Officer's Pay and Allowances.
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Successful.	Unsuccessful	Doubtful.				
												Rs.	*Rs. a. p.*
119	67	149	18	18	..	1	111	54	21	59·6	186	108	63 7 0
12	15	17	5	4	1	..	24	3	..	88·8	..	..	....
10	8	4	..	14	..	..	18	..	..	100·0	..	..	....
141	90	170	23	36	1	1	153	57	21	66·2	186	108	63 7 0
715	535	981	125	133	6	5	1,012	70	168	80·9	1,250	216	17 4 5
470	386	645	182	29	..	..	798	30	28	93·2	856	108	12 9 10
1,840	1,475	3,152	148	15	..	..	3,048	8	259	91·9	3,315	216	6 8 3
579	513	953	130	9	..	..	1,061	30	1	97·1	1,092	144	13 2 11
623	569	1,138	37	17	..	..	947	29	216	79·4	1,192	108	9 0 11
28	30	46	3	9	..	..	46	10	2	79·3	..	..	....
4,255	3,508	6,915	625	212	6	5	6,912	177	674	89·0	1,541	792	10 4 5
1,757	1,482	2,844	377	13	5	..	2,873	162	204	88·7	3,239	288	8 14 3
492	480	852	119	..	1	..	944	3	25	97·1	972	108	11 1 9
1,127	939	1,598	465	2	1	..	1,891	56	119	91·5	2,066	108	5 3 7
605	499	841	237	4	22	..	1,031	68	5	93·3	1,104	216	19 9 0
785	503	968	302	..	18	..	1,144	62	82	88·8	1,288	108	8 6 2
77	72	75	73	1	..	..	146	3	..	97·9	..	..	....
4,843	3,975	7,178	1,573	20	47	..	8,029	354	435	91·0	1,734	828	9 8 9
624	490	675	282	121	2	34	1,038	54	22	93·1	1,114	108	9 11 1
1,072	899	1,713	255	3	..	..	1,865	42	64	94·6	1,971	108	5 2 7
602	297	611	280	1	7	..	754	..	145	83·8	899	108	12 0 2
1,143	1,099	2,140	92	10	..	..	2,026	63	153	90·3	2,242	216	9 10 2
271	183	412	39	3	..	..	439	15	..	96·6	454	108	23 12 7
133	83	148	41	27	..	..	216	..	..	100·0	..	..	....
..	..	..	..	..	..	..	..	..	..	..	..	..	....
3,845	3,051	5,699	989	165	9	34	6,338	174	384	91·9	1,329	648	9 11 2
973	394	214	1,099	52	..	2	1,160	143	64	84·8	1,367	108	7 14 4
1,586	923	1,138	1,371	..	..	..	2,229	142	138	88·8	2,509	108	4 4 10
1,081	652	590	1,135	5	..	3	1,478	212	43	85·2	1,733	108	6 3 8
313	186	240	247	11	1	..	463	16	20	92·7	..	..	....
11	1	..	12	..	..	..	4	8	..	33·3	..	..	....
37	21	23	35	..	..	..	58	..	..	100·0	..	..	....
635	482	398	719	..	..	..	896	108	113	80·2	..	..	....
54	29	51	32	..	..	..	67	6	10	80·7	..	..	....
13	..	..	13	..	..	..	13	..	..	100·0	..	..	....
..	..	..	..	..	..	..	..	..	..	..	..	..	....
4,703	2,688	2,654	4,663	68	1	5	6,368	635	388	86.1	1,870	324	5 12 5
838	243	56	958	8	..	59	1,060	21	..	98·0	1,081	56	11 1 2
135	144	..	258	11	...	10	265	14	..	94·9	..	..	....
18,760	13,699	22,672	9,089	520	64	114	29,125	1,432	1,902	89·7	1,497	2,756	9 3 2

c At Rs. 18 per mensem. *d* At Rs. 24 per mensem.

TABLE

VACCINATION UNDER

Table of Vaccination through the Agency of the Native Chiefs, arranged according to the exception of Pay of Vaccinators,

Number.	Divisions.	Stations.	Medical Officers.	Number of Native Vaccinators attached.	Total Number Vaccinated.
1	Southern Deccan..	Sattara, Kolapore, &c. ..	Asst. Surgeon Maitland.....	9	6,932
2	Western Guzerat..	Myhee Kanta	„ Mahaffy, M.D..	10	13,205
3	Eastern Guzerat	Baroda.....	„ Peach, M.D.	4	8,158
		Rewa Kanta		2	1,374
4	Northern Deccan..	Peint (Nassick)	„ Pelly	1	350
5	Southern Deccan..	Sawunt Warree	Sub-Asst. Surgeon Spencer ..	1	5,088
			Total..	27	35,107

No. 3.

Native Chiefs' Agency.

the Divisions of Vaccination, and showing Details as in Tables Nos. 1 and 2, with and Cost of Vaccination.

Compared with last Year.			Total Number Vaccinated, arranged according to Sex.		Total Number Vaccinated, arranged according to Caste.					Total Number Vaccinated, arranged according to Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of Persons Vaccinated by each Vaccinator.
1853-54.	Increase.	Decrease.	Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Successful.	Unsuccessful.	Doubtful.		
6,209	633	..	3,710	3,222	6,566	358	8	..	..	5,771	315	846	83·2	770
7,452	5,753	..	6,942	6,263	12,273	932	..	..	..	11,164	515	1,526	84·5	1,320
2,527	4,631	..	4,955	3,203	7,447	706	5	..	..	6,440	806	912	78·9	2,039
..	..	..	794	580	1,321	53	..	..	..	1,224	93	57	89·	687
..	..	..	166	184	335	15	..	..	..	304	21	25	86·5	350
5,756	..	668	2,571	2,517	4,672	293	123	..	..	4,561	475	52	89·6	3,088
23,034	12,073	..	19,138	15,969	32,614	2,357	136	..	..	29,464	2,225	3,418	83·9	1,300

VACCINATION UNDER REGI

Table of Vaccination by Regimental Medical Officers of

DIVISIONS, &c.		EUROPEAN REGIMENTS. Total Number Vaccinated.	Successful.	Unsuccessful.	Doubtful.	Ratio per Cent. of Successful to Number Vaccinated.
PRESIDENCY DIVISION	Men	5	..	..	5	
	Women	..	..	..	..	
	Children	78	53	22	3	
	Total..	83	53	22	8	63·8
POONA DIVISION	Men	16	6	8	2	
	Women	1	1	..	..	
	Children	112	105	4	3	
	Total..	129	112	12	5	86·4
NORTHERN DIVISION	Men	..	..	..	..	
	Women	..	..	..	..	
	Children	9	8	1	..	
	Total..	9	8	1	..	88·8
SOUTHERN DIVISION	Men	5	1	4	..	
	Women	..	..	..	..	
	Children	87	69	18	..	
	Total..	92	70	22	..	76·0
SIND DIVISION	Men	2	1	1	..	
	Women	..	..	..	..	
	Children	82	76	6	..	
	Total..	84	77	7	..	91·6
RAJPOOTANA FIELD FORCE.	Men	..	..	..	..	
	Women	..	..	..	..	
	Children	14	..	14	..	
	Total..	14	..	14	..	..
ADEN	Men	..	..	..	..	
	Women	..	..	..	..	
	Children	5	5	..	..	
	Total..	5	5	..	..	100·0
Total..	Men	28	8	13	7	
	Women	1	1	..	..	
	Children	387	316	65	6	
	Total..	416	325	78	13	78·1

Abstract.

	Total Number Vaccinated.
European Regiments..	416
Native ditto ..	2,702
Followers of ditto ..	705
Total..	3,823

MENTAL MEDICAL OFFICERS.

European and Native Corps, for the Year 1854–55.

Native Regiments.					Followers of both.					Total Abstract.				
Total Number Vaccinated.	Successful.	Unsuccessful.	Doubtful.	Ratio per Cent. of Successful to Number Vaccinated.	Total Number Vaccinated.	Successful.	Unsuccessful.	Doubtful.	Ratio per Cent. of Successful to Number Vaccinated.	Total Number Vaccinated.	Successful.	Unsuccessful.	Doubtful.	Ratio per Cent. of Successful to Number Vaccinated.
53	24	23	6		1	1	..	..		59	25	23	11	
2	2	..	..		..	..	..	..		2	2	..	..	
141	113	19	9		67	33	28	6		286	199	69	18	
196	139	42	15	70·9	68	34	28	6	50·0	347	226	92	29	65·1
51	16	34	1		15	14	1	..		82	36	43	3	
1	..	1	..		3	3	..	..		5	4	1	..	
990	867	117	6		235	207	25	3		1,337	1,179	146	12	
1,042	883	152	7	84·7	253	224	26	3	88·5	1,424	1,219	190	15	85·6
46	25	15	6		4	3	1	..		50	28	16	6	
15	8	5	2		..	..	..	..		15	8	5	2	
388	277	86	25		62	57	3	2		459	342	90	27	
449	310	106	33	69·0	66	60	4	2	90·9	524	378	111	35	72·1
32	13	14	5		..	..	..	..		37	14	18	5	
1	1	..	..		..	..	..	..		1	1	..	..	
323	278	32	13		19	17	2	..		429	364	52	13	
356	292	46	18	82·0	19	17	2	..	89·4	467	379	70	18	81·1
153	111	15	27		10	8	1	1		165	120	17	28	
15	9	4	2		5	2	2	1		20	11	6	3	
341	242	37	62		96	82	6	8		519	400	49	70	
509	362	56	91	71·1	111	92	9	10	82·8	704	531	72	101	75·4
..	..	..	..		..	..	..	..		..	..	..	..	
..	..	..	..		..	..	..	..		..	..	..	..	
71	42	29	..		178	68	108	2		263	110	151	2	
71	42	29	..	59·1	178	68	108	2	38·2	263	110	151	2	41·8
..	..	..	..		..	..	..	..		..	..	..	..	
..	..	..	..		..	..	..	..		..	..	..	..	
79	62	9	8		10	10	..	..		94	77	9	8	
79	62	9	8	78·4	10	10	..	..	100·0	94	77	9	8	81·9
335	189	101	45		30	26	3	1		393	223	117	53	56·7
34	20	10	4		8	5	2	1		43	26	12	5	60.4
2,334	1,881	329	123		667	474	172	21		3,387	2,671	566	150	78·8
2,702	2,090	440	172	77·3	705	505	177	23	71·6	3,823	2,920	695	208	76·3

Successful.	Unsuccessful.	Doubtful.	Ratio per Cent. of Successful to Number Vaccinated.
325	78	13	78·1
2,090	440	172	77·3
505	177	23	71.6
2,920	695	208	76·3

TABLE

MONTHLY ABSTRACT

Table showing the Number Monthly Vaccinated, and the Per-centage of Successful

1854.

Table Number.	Divisions, &c.	April.		May.		June.		July.		August.	
		Total.	* Per-centage.	Total.	* Per-centage.	Total.	* Per-centage.	Total.	* Per-centage.	Total.	* Per-centage.
	SUPERINTENDENTS.										
1	Presidency	651	82·9	816	82·6	716	87·9	489	79·1	372	84·9
	Konkun	3,181	89·6	2,687	90·2	2,180	94·4	1,498	94·9	1,892	94·6
	Northern Deccan	1,987	89·5	2,022	91·5	1,960	92·8	1,705	92·7	1,675	93·9
	Southern Deccan	2,058	91·1	2,505	87·5	1,318	98·3	1,213	97·7	1,807	92·3
	Western Guzerat	3,403	73·3	3,150	77·6	3,020	77·5	3,500	78·2	2,736	80·6
	Eastern Guzerat	1,408	86·7	1,065	82·3	1,021	85·9	1,293	86·6	1,114	84·4
	Sind	2,590	90·8	2,991	88·0	1,496	89·5	1,537	96·8	835	98·8
	Total..	15,278	85·8	15,236	85·9	11,711	88·4	11,244	88·3	10,431	89·3
	CIVIL SURGEONS, &c.										
	Presidency Div.. Tanna	13	23·0	21	47·6	4	50·0	12	75·0	5	100·0
	Presidency Div.. Alibaugh	5	100·0	4	100·0	..	..	..	..	..	..
	Presidency Div.. Bandora, Dispensary	..	..	..	..	3	100·0	..	..	..	..
	Total..	18	44·4	25	56·0	7	71·4	12	75·0	* 5	100·0
	Poona Division.. Poona	150	92·0	116	75·0	97	86·5	85	85·8	67	77·6
	Poona Division.. Ahmednuggur	95	89·4	143	93·7	128	94·5	44	84·0	37	91·8
	Poona Division.. Sattara	619	95·3	411	90·7	257	95·7	212	90·5	146	85·6
	Poona Division.. Dhoolia	39	64·1	16	31·2	..	..	..	..	27	100·0
	Poona Division.. Nassick	90	92·2	102	79·4	135	77·7	75	92·0	117	73·5
	Poona Division.. Mahableshwur	18	94·4	..	..	6	50·0	..	..	..	..
	Total..	1,011	90·0	788	86·2	623	89·7	416	89·1	394	82·7
2	Northern Division Ahmedabad	277	86·6	288	85·4	262	80·5	199	83·9	225	87·5
	Northern Division Kaira	91	96·7	80	97·5	82	96·3	84	96·4	71	98·5
	Northern Division Rajkote	144	88·8	108	95·3	143	88·8	173	89·5	122	88·5
	Northern Division Surat	203	90·6	102	94·1	70	95·9	64	89·0	56	94·6
	Northern Division Broach	110	94·5	101	85·1	101	88·1	68	80·8	55	85·8
	Northern Division Bhooj Dispensary	44	93·1	13	100·0	..	..	3	100·0	1	100·0
	Total..	869	90·3	692	89·8	658	87·0	591	87·6	530	89·8
	Southern Division Belgaum	118	100·0	100	100·0	65	95·3	51	94·1	81	90·1
	Southern Division Dharwar	239	94·9	246	98·3	63	92·0	129	93·0	169	95·8
	Southern Division Sholapore	60	81·6	56	83·8	73	84·9	61	85·2	73	79·4
	Southern Division Kolapore	112	95·5	118	72·8	207	89·3	178	93·8	156	90·3
	Southern Division Rutnagherry	71	100·0	52	100·0	20	90·0	17	100·0	17	100·0
	Southern Division Vingorla	42	100·0	15	100·0	20	100·0	34	100·0	21	100·0
	Total..	642	95·6	587	92·3	448	90·4	470	93·1	517	91·2
	Sind Division .. Kurrachee	62	90·3	120	100·0	75	93·3	95	86·3	103	89·3
	Sind Division .. Hydrabad	204	98·0	289	89·6	275	98·9	199	82·9	207	85·0
	Sind Division .. Shikarpoor	236	97·8	225	97·3	26	100·0	224	47·7	247	94·3
	Sind Division .. Kurrachee Dispensary	39	100·0	30	100·0	270	86·6	21	100·0	6	100·0
	Sind Division .. Larkhana	..	..	..	..	..	..	..	..	..	..
	Sind Division .. Jerruck	..	..	..	..	..	..	30	100·0	2	100·0
	Sind Division .. Meerpoor	69	30·4	38	94·7	132	93·9	184	91·8	271	88·5
	Sind Division .. Meerpoor Buttora	22	72·7	18	77·7	43	86·0	..	..	..	..
	Sind Division .. Mahomed Khan's Tanda	..	..	..	..	..	..	..	..	..	..
	Total..	632	89·0	720	94·1	821	92·9	753	76·2	857	89·8
	Aden	92	86·7	111	95·4	115	93·9	88	97·7	85	100·0
	Bushire	..	..	..	..	..	..	..	..	..	..
	Total..	3,264	91·1	2,923	90·3	2,672	90·3	2,330	85·6	2,388	89·2
	NATIVE CHIEFS' AGENCY.										
3	Southern Deccan	504	86·8	582	89·5	586	73·8	426	92·2	512	80·2
	Myhee Kanta	1,052	87·3	905	81·4	1,006	83·3	1,055	84·2	882	84·8
	Baroda	887	76·6	737	96·7	714	79·4	623	71·2	451	82·4
	Rewa Kanta	..	..	..	..	..	..	..	..	..	..
	Peint (Nassick)	..	..	..	..	..	..	..	..	..	..
	Sawunt Warree	203	100·0	1,291	91·9	560	91·2	464	92·2	116	92.2
	Total..	2,646	83·2	3,515	89·8	2,866	81·9	2,568	82·6	1,962	84·9
4	REGIMENTAL MEDICAL OFFICERS	..	..	..	..	..	..	..	..	..	..
	Total..	21,188	86·3	21,674	87·1	17,249	87·6	16,142	87·0	14,781	88·7

* Successful cases.

	Totals.	Monthly Averages.
Table No. 1	161,979	13,498
„ 2	32,459	2,705
„ 3	35,107	2,925
Total..	229,545	19,129

OF VACCINATION.

Cases to Total Number Vaccinated; compiled from Tables Nos. 1, 2, and 3.

September.		October.		November.		December.		1855. January.		February.		March.		Total for the Year.	* Percentage.
Total.	* Percentage.	Total.	* Percentage.	Total.	* Percentage.	Total.	* Percentage.	Total.	* Percentage.	Total.	* Percentage.	Total.	* Percentage.		
526	84·9	551	85·8	484	84·3	555	85·5	708	89·4	608	89·6	743	89·0	7,218	85·7
2,621	95·4	2,428	95·0	2,826	94·1	3,380	95·3	3,521	94·9	3,305	92·6	2,983	92·6	32,502	93·5
1,727	95·0	1,470	92·2	2,103	96·6	2,501	95·2	2,278	96·6	1,835	96·6	1,862	96·1	23,125	94·2
1,396	91·5	1,702	85·5	1,461	95·1	1,413	94·5	2,164	91·1	1,385	89·6	1,331	93·5	19,753	91·8
2,996	75·2	2,750	80·2	3,192	81·9	3,824	83·4	3,845	83·5	3,996	84·8	4,199	83·2	40,620	86·2
974	86·8	1,591	87·0	1,748	88·2	2,155	86·1	1,983	86·4	1,986	90·0	1,863	88·4	18,161	86·8
1,115	98·2	1,148	98·0	1,238	96·1	1,133	87·0	1,718	87·1	2,844	94·9	1,955	92·6	20,600	92·4
11,354	88·6	11,600	88·5	13,052	90·6	14,961	89·9	16,217	89·8	15,959	90·8	14,936	89·8	161,979	88·8
12	33·3	10	..	5	100·0	26	65·3	32	90·6	28	67·8	18	44·4	186	59·6
..	..	..	..	4	25·0	12	100·0	..	..	2	100·0	..	..	27	88·8
..	..	..	..	..	..	..	..	15	100·0	..	..	..	..	18	100·0
12	33·3	10	..	9	66·6	38	76·3	47	93·6	30	70·0	18	44·4	231	66·2
62	80·6	77	67·5	101	83·1	107	78·5	122	80·3	129	79·0	137	78·8	1,250	80·9
33	96·9	46	97·8	54	92·5	53	92·4	68	95·5	73	95·8	82	92·6	856	93·2
172	86·6	156	87·1	141	90·7	222	93·2	241	92·5	202	90·4	476	92·8	3,315	91·9
66	100·0	114	100·0	175	100·0	151	100·0	195	100·0	153	100·0	156	100·0	1,092	97·1
80	78·7	91	81·3	81	72·8	102	77·4	107	85·9	116	81·0	96	83·3	1,192	79·4
..	..	..	..	3	100·0	4	100·0	11	72·7	10	68·7	..	..	58	79·3
413	87·1	484	86·9	555	90·2	630	90·1	744	91·8	749	89·3	947	90·3	7,763	89·0
243	89·7	264	87·5	280	90·7	286	91·6	302	92·7	306	93·1	307	91·8	3,239	88·7
60	100·0	70	97·1	78	96·1	87	97·7	88	95·4	88	97·7	93	96·7	972	97·1
149	89·8	151	90·7	185	91·2	186	91·9	209	93·3	234	91·4	204	95·4	2,066	91·5
56	94·6	71	95·7	86	93·0	83	95·1	80	95·0	95	96·8	138	91·3	1,104	93·3
51	74·5	50	86·0	90	87·7	125	92·0	132	90·1	175	90·2	230	91·7	1,288	88·8
..	..	3	100·0	3	100·0	26	100·0	13	100·0	25	100·0	18	100·0	149	97·9
559	89·9	609	90·3	720	91·3	793	93·0	824	93·0	923	93·1	1,050	93·2	8,818	91·0
94	90·4	99	87·8	127	93·7	100	99·0	102	86·2	89	89·8	88	89·7	1,114	93·1
173	89·0	142	92·8	156	96·7	153	94·7	172	93·6	173	95·9	156	94·8	1,971	94·6
69	81·1	67	79·1	84	84·5	68	83·8	75	85·3	98	80·7	115	86·9	899	83·8
152	90·7	255	97·6	181	91·7	247	90·2	181	86·7	237	91·5	218	87·1	2,242	90·3
23	100·0	34	88·2	20	95·0	45	100·0	47	97·8	55	94 5	53	92·4	454	96·6
41	100·0	18	100·0	9	100·0	..	..	..	..	10	100·0	6	100·0	216	100·0
552	90·0	615	92·3	577	92·7	613	92·8	577	89·4	602	92·1	636	89·9	6,896	91·9
129	71·3	127	81·1	136	90·4	133	81·2	126	64·2	134	84·9	128	93·7	1,367	84·8
197	82·7	203	84·2	154	83·7	158	82·9	227	88·5	195	92·8	201	90·0	2,509	88·8
444	100·0	76	60·5	47	97·8	21	28·5	3	..	15	46·6	169	66·8	1,733	85·2
13	100·0	11	100·0	16	100·0	14	100·0	31	100·0	17	100·0	31	100·0	499	92·7
..	..	..	..	..	..	12	33·3	..	..	..	..	..	..	12	33·3
5	100·0	..	..	..	..	..	..	..	..	..	..	..	..	58	100·0
240	72·3	138	73·1	33	63·6	..	..	..	..	..	..	6	100·0	1,117	80·2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	83	80·7
..	..	..	..	..	..	..	..	..	..	13	100·0	..	..	13	100·0
1,034	86·5	555	77·8	386	86·7	338	77·8	387	80·8	373	88·7	535	84·3	7,391	86·1
86	100·0	87	100·0	90	100·0	133	100·0	75	100·8	60	100·0	59	100·0	1,081	98·0
..	..	..	..	..	..	..	..	..	..	..	..	..	..	279	94·9
2,656	88·2	2,360	87·2	2,397	90·8	2,554	90·2	2,654	90·2	2,797	91·1	3,245	90·1	32,459	89·7
432	89·3	562	82·3	584	73·3	612	82·6	622	80·5	816	87·2	694	83·4	6,932	83·2
966	80·8	1,094	82·5	1,127	88·1	1,053	81·4	1,335	85·3	1,235	89·1	1,494	84·0	13,205	84·5
462	80·9	583	82·6	644	88·1	688	73·5	681	71·3	795	72·4	893	78·2	8,158	78·9
..	..	..	..	..	..	292	92·1	436	91·5	283	87·6	363	84·8	1,374	89·0
..	..	..	..	..	..	30	63·3	101	91·0	103	90·2	116	86·2	350	86·5
235	69·3	263	88·5	390	90·2	492	86·7	527	92·2	189	86·7	358	83·7	5,088	89·6
2,095	81·3	2,502	86·8	2,745	85·2	3,107	81·6	3,702	82·5	3,421	84·5	3,918	81·9	35,107	83·9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	3,823	76·3
16,105	87·6	16,462	88·1	18,134	89·8	20,682	88·7	22,573	88·7	22,177	89·9	22,099	88·4	238,368	88·0

Monthly Averages from December to June.	Monthly Averages from June to December.
15,431	11,565
2,906	2,457
3,395	2,456
21,732	16,479

TABLE

VACCINATION ACCORDING TO

Table showing the Monthly Number of Vaccinations, compiled from

	Hindoos.			Mussulmans.			Christians.			Parsees.			Other Castes.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
April, 1854	9,268	7,476	16,744	2,616	1,641	4,257	84	52	136	25	8	33	13	5	18
May.....	9,544	7,469	17,013	2,800	1,645	4,445	119	61	180	7	3	10	16	10	26
June.....	7,905	6,421	14,326	1,674	1,105	2,779	72	45	117	7	1	8	12	7	19
July.....	7,384	6,007	13,391	1,754	922	2,676	44	21	65	2	1	3	4	3	7
August.....	6,849	5,753	12,602	1,297	802	2,099	43	19	62	2	3	5	6	7	13
September	7,427	6,198	13,620	1,314	1,043	2,357	65	49	114	7	5	12	1	1	2
October	7,579	6,637	14,216	1,379	742	2,121	54	40	94	6	7	13	12	6	18
November	8,414	7,131	15,545	1,465	1,010	2,475	46	38	84	7	2	9	7	14	21
December	9,814	8,090	17,904	1,588	1,035	2,623	88	49	137	10	8	18	..	..	..
January, 1855..	10,124	8,911	19,035	2,002	1,242	3,244	166	100	266	14	14	28	..	..	..
February.....	9,954	8,236	18,190	2,206	1,519	3,725	113	82	195	37	18	55	5	7	12
March	9,703	8,064	17,767	2,270	1,722	3,992	177	79	256	49	30	79	4	1	5
Total..	103,965	86,388	190,353	22,365	14,428	36,793	1,071	635	1,706	173	100	273	80	61	141
Bushire	..	..	..	124	134	258	6	5	11	..	..	..	5	5	10
Regimental Medical Officers.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total..	103,965	98,388	190,353	22,489	14,562	37,051	1,077	640	1,717	173	100	273	85	66	151

No. 6.

Sex, Caste, and Result.

Tables Nos. 1, 2, *and* 3, *arranged according to Sex, Caste, and Result.*

Total.			Successful.			Unsuccessful.			Doubtful.			Total of Male and Female.
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
12,006	9,182	21,188	10,390	7,904	18,294	640	515	1,155	976	763	1,739	21,188
12,486	9,188	21,674	10,918	7,980	18,898	489	387	876	1,079	821	1,900	21,674
9,670	7,579	17,249	8,500	6,626	15,126	364	291	655	806	662	1,468	17,249
9,188	6,954	16,142	8,036	6,012	14,048	492	380	872	660	562	1,222	16,142
8,197	6,584	14,781	7,306	5,813	13,119	339	249	588	552	522	1,074	14,781
8,814	7,291	16,105	7,733	6,379	14,112	394	347	741	687	565	1,252	16,105
9,030	7,432	16,462	7,980	6,528	14,508	348	306	654	702	598	1,300	16,462
9,939	8,195	18,134	8,923	7,379	16,302	341	264	605	675	552	1,227	18,134
11,500	9,182	20,682	10,181	8,164	18,345	459	345	804	860	673	1,533	20,682
12,306	10,267	22,573	10,915	9,110	20,025	358	307	665	1,033	850	1,883	22,573
12,315	9,862	22,177	11,073	8,869	19,942	399	331	730	843	662	1,505	22,177
12,203	9,896	22,099	10,771	8,780	19,551	556	387	943	876	729	1,605	22,099
127,654	101,612	229,266	112,726	89,544	202,270	5,179	4,109	9,288	9,749	7,959	17,708	229,266
135	144	279	128	137	265	7	7	14	..	..	..	279
..	..	3,823	..	..	2,920	..	..	695	..	..	208	3,823
127,789	101,756	233,368	112,854	89,681	205,455	5,186	4,116	9,997	9,749	7,959	17,916	233,368

TABLE

General Abstract of Vaccination

Designation of Tables.	Total Number Vaccinated.	Compared with last Year.		
		1853-54.	Increase.	Decrease.
No. 1, Vaccination under Superintendents	161,979	140,981	20,998	..
No. 2, Ditto under Civil Surgeons, &c.	32,459	38,572	..	6,113
No. 3, Ditto by the Native Chiefs' Agency	35,107	23,034	12,073	..
No. 4, Ditto by Regimental Medical Officers	3,823	3,523	300	..
Total..	233,368	206,110	27,258	..

No. 7.

for the Year 1854-55.

Total Number Vaccinated, arranged according to Sex.		Total Number Vaccinated, arranged according to Caste.					Total Number Vaccinated, arranged according to Result.			Ratio per Cent. of Successful to Number Vaccinated.
Male.	Female.	Hindoos.	Musulmans.	Christians.	Parsees.	Other Castes.	Successful.	Unsuccessful.	Doubtful.	
80,891	72,088	135,067	25,605	1,061	209	37	143,946	5,645	12,388	88·8
18,760	13,009	22,672	9,089	520	64	114	29,125	1,432	1,902	89·7
19,138	15,969	32,614	2,357	136	..	..	29,464	2,225	3,418	83·9
..	..	..	..	..	..	..	2,920	695	208	76·3
127,789	101,756	190,353	37,051	1,717	273	151	205,455	9,997	17,916	88·0

TABLE

SMALL-

Table showing the Admissions and Deaths from Small-pox amongst European and of the Bombay Presidency, with the Per-centage of Deaths to Strength

Divisions.	European Troops.									Native Troops.								
	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Per-centage of Deaths to		Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Per-centage of Deaths to	
								Strength.	Treated.								Strength.	Treated.
Presidency Division....	1,017	..	..	..	..	..	..	..	..	3,124	..	10	10	5	..	5	..	..
Poona „	2,819	1	14	15	13	2	..	0·07	13·3	7,994	1	7	8	1	..	..	..	..
Northern „	477	..	..	..	..	..	..	..	..	6,492	7	25	32	29	3	..	0·04	9·3
Southern „	1,150	..	1	1	..	1	..	0·08	100·0	4,336	6	3	9	7	1	1	0·02	11·1
Sind „	1,782	..	..	..	..	..	..	..	..	6,545	..	15	15	8	6	1	0·09	40·0
Rajpootana Field Force.	115	..	..	..	..	..	..	..	..	3,256	2	5	7	5	..	2	..	..
Aden	516	..	..	..	..	..	..	..	..	1,080	..	..	..	..	..	..	..	..
Total..	7,876	1	15	16	13	3	..	0·03	18·7	32,827	16	65	81	61	11	9	0·03	13·5

Abstract.

Divisions.	Remained.	Admitted.
Presidency Division	4	84
Poona „	5	31
Northern „	10	35
Southern „	6	7
Sind „	..	29
Rajpootana Field Force..	2	5
Aden	..	16
Total..	27	207

Bombay, Medical Board Office, 21st February 1856.

No. 8.

Pox.

Native Troops, Prisoners in Jails, Civil Hospitals, and Dispensaries, in each Division and to Treated; and an Abstract of the whole for the Year 1854–55.

Prisoners in Jails.									Civil Hospitals.									Dispensaries.								
Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Per-centage of Deaths to		Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Per-centage of Deaths to		Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Per-centage of Deaths to	
							Strength.	Treated.								Strength.	Treated.								Strength.	Treated.
870	..	..	..	..	..	..	..	..		4	74	78	29	22	27	..	28·2		..	..	..	..	..	..	..	..
1,307	..	..	..	..	..	..	..	..		3	10	13	13	..	..	..	..		..	..	..	..	..	..	..	..
924	..	..	..	..	..	..	..	..		..	1	1	1	..	..	..	..		3	9	12	10	2	..	..	16·6
1,339	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..		..	3	3	3	..	..	..	..
1,156	..	2	2	2	..	..	..	..		..	2	2	2	..	..	..	..		..	10	10	7	3	..	..	30·0
..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..
160	..	..	..	..	..	..	..	..		..	16	16	6	7	3	..	43·7		..	..	..	..	..	..	..	..
5,756	..	2	2	2	..	..	..	..	Unknown and variable.	7	103	110	51	29	30	..	26·3	Unknown and variable.	3	22	25	20	5	..	..	20·0

Total.	Discharged.	Died.	Remaining.	Per-centage of Deaths to Treated.
88	34	22	32	25·0
36	33	3	..	8·3
45	40	5	..	11·1
13	10	2	1	15·3
29	19	9	1	31·0
7	5	..	2	..
16	6	7	3	43·7
234	147	48	39	20·5

By order of the Medical Board,
W. C. Coles, M.D., Assistant Surgeon,
Acting Secretary, Medical Board.

RESOLUTION OF GOVERNMENT,

DATED THE 26TH APRIL 1856.

THE Right Honorable the Governor in Council desires to thank the Medical Board for the very complete Report of the operations of the Vaccination Department throughout the Presidency, which is contained in Dr. Coles' letter No. 428, dated 21st February 1856. The copies of this letter, which have been printed, should be distributed as usual, for general information; a sufficient number being reserved for submission to the Honorable the Court of Directors.

2. The proceedings reported, Government consider generally satisfactory; but the Medical Board should be requested to state if the populous Town and Island of Bombay appear to them to be sufficiently provided for in the matter of Vaccination Establishment. It seems to Government that, considering the importance and population of Bombay, a separate Superintendent, whose time and energies might be wholly devoted to Vaccination duties, would probably be desirable.

3. With reference to paragraph 22 of the Report, the Protector of Emigrants should be requested to state whether any steps are taken to ascertain that labourers sent to Mauritius by the Emigration Agent have been previously vaccinated; if not, this should be ascertained in future, and in the event of the Coolies not having been vaccinated, the Agent should endeavour to induce them to be so previous to embarkation.

4. Government hope that the approaching Census will enable the Medical Board to show, in future Vaccination Reports, what proportion the number of persons vaccinated in each district bears to the total population, and number of births, and that it will be possible to define more accurately the area and population of each Superintendent's charge. In future Reports also it would be well, if possible, to show the age of persons vaccinated, so far at least as to distinguish those under and above one year of age, and those vaccinated as children and as adults.

(Signed) W. HART,
Secretary to Government.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR THE YEAR 1855.

Bombay:
PRINTED FOR GOVERNMENT
AT THE
BOMBAY EDUCATION SOCIETY'S PRESS.

1856.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

1855.

No. 2276 OF 1856.

TO THE SECRETARY TO GOVERNMENT,
GENERAL DEPARTMENT.

SIR,—I have the honour, by direction of the Medical Board, to forward the Annual Report of Vaccination for the year A. D. 1855, for submission to the Right Honorable the Governor in Council, and for transmission to the Honorable the Court of Directors.

2. In accordance with Government Resolution No. 4953 of 1855, Judicial Department, the Civil Medical Returns, inclusive of those on Vaccination, and Reports on Jails, &c. have been made to correspond with the calendar, instead of, as heretofore, with the official year. By this change, uniformity with regard to the Reports of the Inspector General of Prisons, and with the practice followed at the other Presidencies, will be ensured.

Change from the Official to the Calendar Year.

3. As by Medical Board's letter No. 428, of 21st February 1856, the Report of Vaccination was brought down to the 31st March 1855, it would follow that the present Report should include only the remaining nine months of that year; (the Reports of Superintendents and others embrace this limited period only).

Same subject.

4. But to restrict a general review of vaccination to the operations during nine months would, in the opinion of the Medical Board, not answer so useful a purpose as to include

The manner in which the change is to be effected.

the three months previously reported on, and, upon a reconstruction of the Tables of the former year, to show clearly the work performed in 1855, as compared with that of 1854, and thus effect the alteration from the official to the calendar year.

5. The figures in the different Reports of the Superintendents and others will therefore be altered from nine to twelve months, and this Report made to include the whole of the year 1855, in the manner above particularised.

Reports of Medical Officers apply to the whole year.

6. In consequence of this change, the number of vaccinations performed by Regimental Medical Officers will be omitted, and the Medical Board have directed that the following arrangement shall be observed in framing the Report, the Annual Return (Form 55) being arranged alphabetically in order to facilitate easy reference :—

Vaccinations by Regimental Medical Officers omitted, &c.

Arrangement of the Report.

I. An explanation of the Tables.

II. A history of vaccination performed by Divisional Superintendents, in connection with Table No. 1.

III. A history of vaccination as performed in fixed establishments under Civil Surgeons and others, in reference to Table No. 2.

IV. A history of vaccination under the agency of Native Chiefs, in reference to Table No. 3.

V. General abstract of vaccination.

VI. Small-pox as it occurred in the Districts, and amongst European and Native Troops, Jails, Civil Hospitals, and Dispensaries.

VII. Miscellaneous remarks.

Appendix.

I. EXPLANATION OF THE TABLES.

7. Table No. 1 in the Appendix exhibits the progress of vaccination under Divisional Superintendents; the names of Medical Officers so employed; the strength of each establishment; the total of operations performed during the year, contrasted with last year, and arranged according to sex, caste, and result; the ratio of successful vaccinations to total vaccinated; the average number of operations performed by each Vaccinator; yearly pay of Vaccinators; and average cost of each 100 persons vaccinated.

Table No. 1.

8. Table No. 2 shows similar results with regard to fixed establishments.

Table No. 2.

9. Table No. 3 is prepared in the same manner, to show the work done by Vaccinators employed by the Native Chieftains.

Table No. 3.

10. Table No. 4 is a general abstract of Tables No. 1, 2, and 3, and is appended to show at a glance, and in a more condensed form, the information contained in those tables.

Table No. 4.

11. Table No. 5 shows the admissions and deaths from small-pox amongst European and Native Troops, Prisoners in Jails, Civil Hospitals, and Dispensaries, in each Division of the Bombay Presidency, with an abstract for the whole year 1855.

Table No. 5.

II. VACCINATION UNDER SUPERINTENDENTS.

12. In reference to Table No. 1, it will be observed that in the seven Divisions there have been one hundred and seventy-six thousand three hundred and eighty-nine (176,389) vaccinations performed during the year by one hundred and nineteen (119) Vaccinators, thus showing an excess over last year of seven thousand one hundred and fifty-eight (7,158). This increase has been made by the work done in five Divisions, there having been a decrease in the number of operations in the Southern Deccan, and Sind, combinedly amounting to nine thousand six hundred and forty-five (9,645).

Number of Vaccinations performed under Divisional Superintendents.

Increase of Vaccination over last year.

Decrease in some Divisions.

13. The classification according to sex exhibits a preponderance of males; there are ninety-six thousand six hundred and seventy (96,670) males, and seventy-nine thousand seven hundred and nineteen (79,719) females, being an excess of sixteen thousand nine hundred and fifty-one (16,951) of the former.

Classification according to Sex.

14. With regard to castes, there were one hundred and forty-nine thousand and six (149,006) Hindoos, twenty-five thousand five hundred and ninety-one (25,591) Mussulmans, one thousand four hundred and nine (1,409) Christians, three hundred and forty-eight (348) Parsees, and thirty-five (35) of other castes.

Classification according to Caste.

15. Looking at the analysis of results, it seems that one hundred and fifty-nine thousand three hundred and thirty-two (159,332) were vaccinated successfully, or 90·3 per cent., which is about two per cent. higher than last year.

Result of total vaccinated, &c.

16. The failures were five thousand three hundred and eight (5,308), and the doubtful cases eleven thousand seven hundred and forty-nine (11,749).

The same subject.

17. The average number of persons vaccinated by each Vaccinator was one thousand four hundred and eighty-two (1,482), being an increase of one hundred and nineteen (119) operations per man over last year.

Average number vaccinated by each Operator.

18. The average cost of vaccination per one hundred (100) persons, exclusive of Superintendents' pay, was Rupees ten, six annas, and six pies (10-6-6), being a decrease from the former year of fifteen annas and nine pies (0-15-9).

Cost of Vaccination per 100 persons vaccinated.

19. The following Statements are made with reference to Table No. 1, and the Reports of the Superintendents themselves :—

PRESIDENCY DIVISION.

Assistant Surgeon J. Peet, Superintendent.

Number of Vaccinators, 10.

20. The total number of operations performed were eight thousand four hundred and ninety-four (8,494), being an increase of one thousand five hundred and eighty-five (1,585) over the year 1854. The successful cases amounted to seven thousand five hundred and thirty-two (7,532), or 88·6 per cent.

Total number of Vaccinations, &c.

21. Dr. Peet writes—"There is little to notice as compared with the last year; the vesicle throughout the period now reported on has been quite satisfactory, and it may be affirmed that the vaccine disease is at the present time everything that can be desired. The assistance of some of the members of my establishment has been afforded to the Graduates of the Grant Medical College, who have established Vaccination Stations, and, I hope to be hereafter able to report, with beneficial results."

Report of the Superintendent.

CONCAN DIVISION.

Assistant Surgeon Ward (and afterwards Harris) Superintendent.

Number of Vaccinators, 18.

22. The total number of vaccinations performed was thirty-five thousand nine hundred and fifty-five (35,955), or an increase of two thousand five hundred and three (2,503) over the year 1854. The successful cases amounted to thirty-three thousand eight hundred and fifty-two (33,852), or the high rate of about 94 per cent.

Total number vaccinated, &c.

23. The Superintendent reports—"The operations of the year now closed exceed the average of last year. But in proportion to the population the progress of vaccination is far below what it ought to be, especially in the Tanna Zillah, the returns from which scarcely exceed one-fifth of the whole, though equal to if not greater in population and area than the Rutnagherry Collectorate. Inoculation is carried on in some parts of this Division."

Report of the Superintendent.

Northern Deccan Division.

Assistant Surgeon W. Davey, Superintendent.

Number of Vaccinators, 18.

Total vaccinated, and high rate of successful cases.

24. The total number of persons vaccinated was twenty-six thousand four hundred and ninety (26,490), being an increase of two thousand four hundred and sixty-six (2,466) over the previous year of 1854. The successful cases reported amounted to twenty-five thousand two hundred and six (25,206), or about 95 per cent.; the highest rate of percentage in any Division.

Report of the Superintendent.

Increase of operations ascribed to zeal of the Establishment.

25. Dr. Davey writes—"Contrary to my expectations, the contrast with the five preceding years exhibits a much larger balance than I was led to expect when preparing my last Annual Report, a result affording a fair criterion whereby to judge of the conduct of the establishment during the period in question.

Satisfactory results in the Ahmednuggur Zillah, &c.

"It will be recollected that my attention had been drawn to the ill-success of vaccination in the Ahmednuggur Zillah, as compared with results obtained in the other districts of my Division. In the last Annual Report I mentioned what steps had been taken to improve matters there, and I have now the satisfaction of observing that a change for the better has taken place, the monthly individual average of vaccinations having been increased from seven thousand eight hundred and forty-one (7,841) to nine thousand seven hundred and three (9,703), and this increase, I have reason to believe, is, and will be, even more progressive.

Conduct of Vaccinators for the most part satisfactory.

"With few exceptions, I have had reason to be satisfied with my staff of Vaccinators. A large portion of my Division has been gone over, and vaccination has been extended into Districts into which it had not been previously introduced.

Difficulty in testing Returns.

"I have seen no reason to question the reliability of the Returns in any way; but I have experienced difficulty in testing them, inasmuch as many of the Village Authorities keep no records of the vaccinations which have taken place in their villages, and the authority of the Superintendent with respect to vaccination seems to be but little understood. This has been more especially the case in the Ahmednuggur Collectorate; but the circumstance having been brought to the notice of the Collector, steps have been taken to correct the evil complained of. I deem this of much importance, for it is evident that the greatest check that can be

Authority of the Superintendents not understood, &c.

imposed to prevent false Returns is the ability and facility of detection, and it is the duty, as it ought to be in the power, of the Superintendent to conduct examinations of this nature himself.

"The very large percentage of successful cases is a very striking feature in the Returns of Vaccinations, and my attention has been especially directed to this circumstance. During my tour the experience which I have acquired certainly confirms the statements of the Vaccinators. It is indeed rare to meet with an unsuccessful case when immediate vaccination is practised; on the other hand, when glasses or crusts have been used, failure almost invariably results, and, in successful cases, the vesicle is far from satisfactory; but the usual appearances are again restored in cases which are vaccinated direct from these small and turbid vesicles.

Success of operations verified by inquiry.

Cause of high rate of successful operations.

"Much objection is still offered to vaccination in many parts, and great difficulty in persuading the people to avail themselves of the prophylactic is often experienced; but, as its harmless nature and protective power become better known, it is to be hoped that the indifference of Native character will be overcome. I may mention that more than usual difficulty existed in the Joonere Talooka of the Poona Zillah, and on repairing thither I found an impression prevailed that vaccination was intended by the Government to precede deportation of the population on a large scale. It is possible that this absurd belief may have originated from the practice of vaccinating emigrants prior to their departure from Bombay. The impression, however, is now giving way, and I hope vaccination will meet with a fair share of success.

Objections offered to Vaccination, especially in the Joonere Talooka, &c.

"Nothing can be better than the stock of lymph in use in this Division, and for the present I see no reason for desiring its renewal.

Lymph good.

"From Returns sent in by the District Officer, it appears that twelve thousand two hundred and sixty-eight (12,268) cases of natural small-pox have occurred in my Division between the 1st April and 31st December, with a mortality of one thousand six hundred and twenty-two (1,622), or 13·22 per cent."

Occurrence of Small-pox.

SOUTHERN DECCAN DIVISION.

Assistant Surgeon G. W. Maitland, Superintendent.

Number of Vaccinators, 18.

26. The total number of vaccinations performed was sixteen thousand two hundred and eight (16,208), being in comparison to last year a decrease of six thousand nine hundred

Total number vaccinated, &c.

and ninety-seven (6,997). The number of successful cases was fourteen thousand seven hundred and twenty-four (14,724), or 90·8 per cent.

27. Dr. Maitland writes—"This Return cannot but be considered below the average, and which must be ascribed to the continued illness of some Vaccinators and dismissal of others, circumstances which have caused much interruption to the progress of vaccination.

Report of the Superintendent.

Sickness and dismissal of Vaccinators have caused interruption.

"With the exception of Beejapoor, in the Sattara Zillah, vaccination has otherwise been carried on regularly by the Government Vaccinators in this Division. In the southern parts of the Sholapore Zillah, and where it may be considered of recent introduction, the work is progressing, and the labours of the Vaccinators in some measure appear to be appreciated.

Vaccination how carried on, &c.

"The expectations raised, and expressed in my Report for 1853-54, with regard to the Beejapoor vaccination, have, I regret to say, not been realised; an unwillingness on the part of the people to receive vaccination, and the difficulties experienced in keeping it up, owing to the great distances which the Vaccinator has had to travel from the scattered state of the villages in that district, are the reasons for its comparative failure.

Unwillingness on the part of the people at Beejapoor, &c.

"The Vaccinator reports (and the circumstances have come under my own observation) that after travelling sometimes many miles for the purpose of vaccinating, he has only been able to obtain one or two subjects, and that, on returning to inspect his work and to secure a fresh supply of lymph, either the children have not been forthcoming, or the parents have refused to allow of the lymph being taken away. This Vaccinator has been removed to the northern districts of Sholapore, where his services are much required.

Difficulty in getting subjects for Vaccination, &c.

"The chief difficulties still encountered in carrying on vaccination in the Southern Muratha Country are—1*st*, an unwillingness on the part of the people generally to submit their children to the operation; and 2*ndly*, that when the operation is successful, very often a feeling of repugnance is manifested towards allowing the Vaccinator to secure a supply of lymph for future operations.

Chief difficulties to Vaccination.

"As I fully entered on this subject in my last Report, and stated my opinion as to the means that perhaps might be adopted to ensure the benefits of vaccination to all classes of the community, I hope to be excused from alluding to it here, further than to state that the views I then ventured to express, have only been confirmed and strengthened by further experience.

Refers to his former Report recommending mild coercive measures, &c.

"I am happy in being able to report that inoculation has in no way interfered with the progress of vaccination, and that during the period under review not a single case of the kind has been brought to my notice.

Inoculation has not interfered with Vaccination.

"Except in the Kolapore State, small-pox has not been prevalent in an epidemic form.

"In the month of June the disease broke out with some virulence in the Bourah districts of Kolapore, and prevailed during the two succeeding months; an additional Vaccinator was immediately appointed by order of the Political Superintendent, and every means were taken, both by myself and Assistants, with a view to arrest the disease.

Small-pox in the Kolapore State, &c.

"The supply of lymph throughout the Division has been uniformly good and effective."

Supply of Lymph good.

WESTERN DIVISION OF GUZERAT.

Assistant Surgeon Mahaffy (afterwards R. Lord) Superintendent.

Number of Vaccinators, 18.

28. The total number of vaccinations performed was forty-five thousand one hundred and fifty-six (45,156), or an increase of six thousand eight hundred and sixty-one (6,861) over the year 1854. Of these, thirty-eight thousand five hundred and twenty-four (38,524), or about 85·3 per cent., were reported as successful.

Total number of Vaccinations.

29. Dr. Lord writes—"Having only assumed charge of the office of Vaccinator in this Division a few weeks before the date to which the accompanying Returns extend, the satisfactory result shown by them must be attributed to the exertions of my predecessor, Dr. Mahaffy, whose energetic advocacy and superintendence of vaccination for many years has tended not a little to induce its present beneficial and widely extended influence in this part of India.

Report of the Superintendent.

Satisfactory results to be attributed to his predecessor.

"A comparison of the number of operations with those of former years, shows a satisfactory increase compared with last year; the number taken for a period of a year are six thousand eight hundred and sixty-one (6,861) above the total number of operations for the preceding twelve months, which then showed a higher number than had ever before been attained in this or any other Division in the Presidency.

Increase.

"Such results must appear to the Medical Board highly satisfactory; and beyond noticing them, I do not feel myself entitled to offer any comment on the proceedings of an Officer

Satisfactory results, &c.

considerably my senior, and of such extensive experience in this particular department as my predecessor."

Eastern Division of Guzerat.

Assistant Surgeon W. Peach, M.D., Superintendent.

Number of Vaccinators, 17.

Total number of operations for the year, &c.

30. The total number of operations performed was twenty-three thousand two hundred and seventy-seven (23,277), being an increase of three thousand three hundred and eighty-eight (3,388) over the former year; of this number twenty thousand four hundred and twenty-seven (20,427), or 87·7 per cent., were reported as successful.

Report of the Superintendent.

31. Dr. Peach reports that "the establishment of Eastern Guzerat in Government employ has been kept up to its full complement during the time under report, excepting for short periods when casualties have occurred. Two new Vaccinators have been

History of the Establishment.

entertained in place of one discharged for ill conduct, and one permitted to resign the Service; two other new hands were entertained early in the year 1855; making altogether four of the establishment who are comparatively inexperienced, and wanting in confidence and reliance on their own personal exertions, only to be acquired by practice. The older Vaccinators have been, on the whole, working in a tolerably satisfactory manner, but, as might be expected, some show greater aptitude and make more progress than others.

"Inoculation has not been practised to my knowledge in any part of the

Inoculators seem to have disappeared from the Southern Districts.

Division, and the Inoculators apparently have altogether disappeared from the southern districts; according to my personal observation, and the reports from the Vaccinators,

No small-pox.

small-pox has not prevailed to any extent during the nine months.

"The lymph generally has been reported good and active; whenever im-

Lymph in general good, &c.

paired, it has become so in the hands of the younger and less experienced Vaccinators, but has always been removed without much difficulty. That inspected has been found to pass through the proper stages, producing an uniform and characteristic vesicle.

Introduction of fresh Lymph.

An attempt was made, during the past year, to introduce a fresh stock of lymph into the Division, both from England and from Bombay, but entirely without success.

"It appears by the Returns that, as usual, by far the greater number of

Progress of Vaccination amongst Castes.

children vaccinated belong to the different Hindoo castes. In Eastern Guzerat Proper, there is, however,

a slight increase in the number of Mussulmans, and also of Parsees, but the number of the latter is very trifling, and affords evidence that these people evince the same antipathy to vaccination as heretofore. The Dhers have increased in number since last report.

"Respecting the distribution of the establishment maintained by Government, little has to be remarked: five men are at present employed in the Surat Collectorate, five in the Broach, and six in the Kaira Zillahs, and one in the territory of the Nuwab of Cambay. It was found necessary, on account of the comparatively small amount of work done, and the difficulty met with in the Surat Collectorate, to reduce the number of Vaccinators in that part of the Division, and to send them to more favourable districts.

Distribution of Vaccinators, &c.

"The amount of assistance and encouragement afforded to the Vaccinators by Native District Officials, may be said to be very limited. In some few instances they have shown, according to the reports of the Vaccinators, decided opposition. It is, however, very difficult, under present arrangement, to prove a charge made by a Vaccinator against an Official, as the one stands alone, with his single word only to support his complaint, whilst, on the other hand, the Official is surrounded by people too ready and willing, I fear, to substantiate anything he may advance against the Vaccinator. It was partly on this account, that in my former Reports I advocated the necessity of furnishing the establishment with permanent Peons to accompany the Vaccinators, or that, at least, they should be supplied with District Police Peons to remain with them during their tour of duty in a Purgunna, to assist and protect them; and my opinion is not altered on this important point. The attendance of a Peon is an evidence of authority peculiar to this country, and without it the inhabitants of every class are readily led to suppose that vaccination has not that active support from Government which is so essential to its extension.

Opposition to Vaccinators by Native Officials.

Difficulties opposed to a Vaccinator proving a charge against a Native Official.

Want of Peons, &c.

"What, however, is so much to be regretted as being probably more prejudicial to the extension of vaccination than active and direct obstruction, is the passive opposition on the part of Native Officials, evinced by their general apathy and indifference to everything connected with vaccination, and which exists in a greater or less degree throughout the Division. The consequence is, that the Natives themselves, following the example of their superiors, in many instances show the greatest reluctance to avail themselves of the presence of the Vaccinators in their neighbourhood.

Apathy on the part of Native Officials, &c.

"Another circumstance which perplexes and delays the Vaccinators in the

discharge of their duty, is the refusal of parents to allow their children to be taken from their own to other villages for the purpose of conveying the lymph in an active and efficient state, and, fearing they may be called upon on this account, they frequently hide or temporarily remove their children. The effect of this is a large return of "Not seen after vaccination"; besides which the maintenance of the vaccine lymph is endangered.

Difficulty in taking Children from one Station to another.

"I scarcely know how this difficulty can be remedied, but probably the presence of a Peon would tend to obviate it in a great degree. The Village Havildars will not accompany the Vaccinators from their own to other villages, nor can this be expected, seeing that they have their own proper duties to occupy their time.

"With a view to assist the Vaccinators, I have written to the Collectors of the three Zillahs in the Eastern Division Guzerat a request, that they will order the Village Tullatees or other local Officers, to furnish each Vaccinator, on his entering a village for the purpose of vaccination, with a nominal list of the children in the village eligible for vaccination (that is, who have never been vaccinated, and who have not had the small-pox), with the father's name and caste, as a guide to the Vaccinator.

Assistance of Collectors has been sought for, &c.

"This request has already been partially acted upon, and I trust that the measure, when fully carried out, will materially assist the Vaccinators, and will also keep the Tullatees and Village Officers aware of the amount of work that is, or should be done, in their respective villages, with reference to the returns they have occasionally to attest.

"The Civil Authorities may yet do much towards the effectual extension of vaccination by endeavouring to overcome the prejudices and apathy not only of the Native Officials with whom they are immediately connected, but also of the population generally in their respective districts, and by giving at the same time all the assistance in their power to the Vaccinators."

Interference of Civil Authorities necessary for extending Vaccination, &c.

Sind Division.

Assistant Surgeon R. Bayne, M.D., Superintendent.

Number of Vaccinators, 15.

32. The total number of persons vaccinated was twenty thousand eight hundred and nine (20,809), being a decrease of two thousand six hundred and forty-eight (2,648) from the former year; of the total number vaccinated nineteen thousand and sixty-seven (19,067), or 91·6 per cent., were vaccinated with success.

Total number vaccinated, &c.

33. It is unnecessary, the Medical Board consider, to state more with respect to this Division, as the circumstances connected with the unusual course adopted by the Superintendent, of forcibly vaccinating adults, have been fully laid before Government in a separate correspondence.

Vaccination of Adults, &c.

34. The Medical Board do not anticipate that similar occurrences will again take place in this Division.

III. VACCINATION BY CIVIL SURGEONS AND OTHERS UNDER SUPERINTENDING SURGEONS OF DIVISIONS.

35. Following the order which has been adopted in this Report, some remarks may now be made upon vaccination as performed by fixed establishments, with reference to Table No. 2, in connection with Form 55.

Vaccination by Fixed Establishments.

36. Vaccination has thus been carried on at thirty-four (34) Stations, twenty (20) of which are provided with a Native Vaccinator. At exactly half of these Stations so provided there has been an increase in the numbers vaccinated over last year, and at half a decrease.

Number of Stations.

37. The maximum increase of eight hundred and twenty-nine (829) was at Dhoolia, whilst the maximum decrease of one thousand one hundred and ten (1,110) was at Kolapore.

Maximum Increase and Decrease.

38. At the remaining fourteen (14) Stations vaccination is carried on by the Hospital establishment of two Medical Officers (Bushire and Mahableshwur), three Sub-Assistant Surgeons, three Apothecaries, two Assistant Apothecaries, and four First Hospital Assistants.

Vaccination how performed at certain Stations.

39. A great increase of numbers vaccinated will be observed in the Bhooj Dispensary, in charge of Sub-Assistant Surgeon Hemraj; seven thousand three hundred and forty-five (7,345) operations have been performed, being an increase of seven thousand one hundred and twenty-seven (7,127) over the former year. This is in a great measure caused by the work performed by four Vaccinators placed under the Sub-Assistant Surgeon's instruction in view to being employed by the Rao of Kutch.

Increase of numbers vaccinated at Bhooj Dispensary.

40. The total number of persons vaccinated by fixed establishments was thirty-eight thousand three hundred and five (38,305), which is an increase over the former year of three thousand six hundred and thirty-six (3,636).

Total of Vaccinations by Fixed Establishments, &c.

41. Of the number vaccinated, there were twenty-one thousand nine hundred and forty-nine (21,949) males and sixteen thousand three hundred and fifty-six (16,356) females.

Results as to Sex, Caste, and Successful Cases, &c.

Distributed into castes, there were Hindoos twenty-eight thousand seven hundred and thirty (28,730), Mussulmans eight thousand eight hundred and six (8,806), Christians five hundred and sixty-one (561), Parsees one hundred and eighty-three (183), other castes twenty-five (25). There were thirty-four thousand nine hundred and ninety-nine (34,999) or 91·3 per cent. successful cases, one thousand one hundred and eighty-four (1,184) unsuccessful, and two thousand one hundred and twenty-two (2,122) doubtful.

Higher rate of successful cases in Fixed than in moveable Establishments.

42. The Medical Board, in para. 87 of their former Report, remarked on the greater success with which vaccination seemed to be performed by fixed than by moveable establishments, and though the total average per cent. of successful cases does not differ much in each class in the period under review, it being in the moveable 90·3, and in the fixed 91·3, still it will be seen on reference to Tables No. 1 and 2, that in the maximums the difference is yet considerable, being one hundred (100) in the latter (fixed), and 95·1 in the former (moveable).

Reason of greater success in Fixed Establishments.

43. The Medical Board are disposed, in some measure, to account for the difference above particularised, in the more limited nature of the work performed by fixed establishments, and that too being carried on by one Vaccinator under the more immediate supervision of the Civil Surgeon, who can always know that the lymph is good, and the subject favourable for its reception, &c.; whereas, with moveable establishments, many operations must necessarily be performed when the Superintendent cannot be present.

Average number of persons vaccinated by each Vaccinator, &c.

The amount of work performed by all nearly equal.

44. The average number of persons vaccinated by each Vaccinator was one thousand four hundred and eighty-five (1,485), which is only three in excess of the average number performed by each Vaccinator of a Division. The excess shown in the last Report was one hundred and thirty-six (136), but for the period under consideration, nearly an equal amount of work has been done by all.

Average Cost of 100 persons vaccinated, &c.

45. The average cost of every one hundred (100) persons vaccinated amounts to Rupees nine, seven annas, and three pies (9-7-3), being a slight increase over the former year, and less by fifteen annas and three pies (0-15-3) than the cost of moveable establishments.

The following information has been submitted by Civil Surgeons, and has reference to Table No. 2:—

Presidency Division.

Tanna.

46. *Tanna.*—Assistant Surgeon A. V. Ward reports a slight increase of eighty-seven (87) compared with the former year, and observes "that this is to some extent encouraging,

though it must be admitted that vaccination in Tanna continues a lamentable failure, seeing that only two hundred and seventy-eight (278) children have been operated on during twelve months." He adds—"the Vaccinator is zealous and diligent in his vocation." At Alibaugh there were only five, and at Bandora Dispensary forty-one operations during the year.

Small amount of work done by Vaccinator, &c.

47. The attention of the Medical Board has been unremittingly directed to the very small amount of good done by the Vaccinator under the orders of the Civil Surgeon Tanna, which happily is the exception to all other Stations. The expediency of retaining this Vaccinator at a Station where the cost of every one hundred (100) operations amounts to the enormous sum of Rupees thirty-eight, thirteen annas, and six pies (38-13-6), seems to the Medical Board very questionable, since they believe as great an amount of good might result from vaccination being carried on by the Hospital establishment attached to the Civil Hospital at that Station, as is effected by the Vaccinator.

Poona Division.

Poona.

48. *Poona.*—Dr. Keith reports that the lymph has been healthy and the supply good throughout all seasons of the year. He notices an increase of one hundred and fifty-six (156) operations over the former year, and speaks well of the activity of the Vaccinator; one thousand five hundred and nine-four (1,594) operations have been performed during the year.

Ahmednuggur.

49. *Ahmednuggur.*—Nine hundred and forty-seven (947) persons have been vaccinated, being an increase of one hundred and seventeen (117) over the former year. The Civil Surgeon, Mr. Fraser, offers no remarks.

Sattara.

50. *Sattara.*—There has been a decrease from the former year of two hundred and seven (207). The Civil Surgeon, Dr. Wiehe, reports—"The lymph has been always good, and the accuracy of the Returns carefully investigated. Three thousand one hundred and thirty-four (3,134) persons have been vaccinated during the year.

Dhoolia.

51. *Dhoolia.*—The increase over the former year amounts to eight hundred and twenty-nine (829); one thousand five hundred and ten (1,510) persons have been vaccinated during the year. The Civil Surgeon, Mr. McKenzie, offers no remarks.

Nassick.

52. *Nassick.*—One thousand three hundred and ninety (1,390) persons have been vaccinated during the year, being an increase over the former year of one hundred and thirty-five (135). The Civil Surgeon, Mr. Pelly, offers no remarks.

53. *Mahableshwur.*—There has been a decrease from the former year of one hundred and nine (109); the total number of persons vaccinated was sixty-six (66). The Superintendent, Surgeon Winchester, reports that "the population on Mahableshwur is not only limited but migratory; the Hospital establishment is confined, and although my Assistant frequently visits the villages round about, he seldom succeeds in finding fit subjects for vaccination. The natives do not oppose vaccination, but they do not seek it; no opportunity is lost of propagating so useful a prophylactic, and the Station generally is not wanting in a supply of virus."

Mahableshwur.

NORTHERN DIVISION.

54. *Ahmedabad.*—The total number vaccinated was three thousand two hundred and eight (3,208), being an increase of ninety-one (91) over the former year. The Civil Surgeon, Mr. Bowie, reports—"Inoculation of small-pox is not practised in the city. The vaccine lymph has been good."

Ahmedabad.

55. *Kaira.*—The Civil Surgeon, Mr. Young, reports that vaccination has been sedulously propagated; nevertheless there is a decrease from the former year of two hundred and sixty-five (265). Six hundred and eighty-four (684) operations have been performed during the year.

Kaira.

56. *Surat.*—One thousand and seventy (1,070) operations have been performed during the year, the decrease from the former year being one hundred and twenty-four (124). The Civil Surgeon, Mr. Dent, accounts for the falling off in numbers, by the Vaccinators of the Superintendent's establishment having zealously vaccinated in the adjacent villages.

Surat.

57. *Rajkote.*—Two thousand four hundred and eighty-six (2,486) persons have been vaccinated. The decrease from last year amounts to seventeen (17), which is assigned by Mr. Clay to the cause above stated.

Rajkote.

58. *Broach.*—There has been an increase at this Station over the former year of two hundred and sixty-one (261); the total vaccinated for the year was one thousand five hundred and thirty-four (1,534). The Civil Surgeon, Mr. Bean, reports that "no small-pox inoculation has been practised, and at all the fixed Stations in this Division the lymph is reported good."

Broach.

SOUTHERN DIVISION.

59. *Belgaum.*—The Civil and Staff Surgeon, Mr. Waller, accounts for the

Belgaum.

decrease, amounting to six hundred and fifty-five (655), by the suspension of vaccination for two months during the arrest, trial, and subsequent dismissal of the Assistant Vaccinator. Six hundred and sixty-seven (667) vaccinations were performed during the year.

60. *Dharwar.*—The same figures, six hundred and fifty-five (655), represent the diminution here also; but no explanation of the cause is offered by the Civil Surgeon, Mr. Forbes. He however notices that "the lymph became unhealthy, and it was necessary to procure a fresh supply from the Divisional Superintendent." He adds—"Inoculation for small-pox is not practised in this country."

Dharwar.

61. One thousand eight hundred and fifteen (1,815) persons were vaccinated during the year; the proportion of successful operations being 88·8 per cent., which is six (6) per cent. below the average of last year. The Civil Surgeon assigns no reason for this, but it was probably caused by deterioration of the virus.

62. *Sholapore.*—One thousand and eighty-eight (1,088) vaccinations have been performed during the year, being an increase of two hundred and senty-five (275) over the former year. The Civil Surgeon, Dr. Sylvester, states—"The supply of lymph has been of good quality, and the Vaccinator attends in the town twice a week for the purpose of performing operations."

Sholapore.

63. *Kolapore.*—There has been a considerable diminution in the number vaccinated. Two thousand four hundred and thirty-eight (2,438) persons have been vaccinated during the year, making a decrease from the former year of one thousand one hundred and ten (1,110). The Civil Surgeon, Mr. Broughton, remarks—"If inoculation did not interfere, these numbers might be largely increased, as opposition is given solely by those who gain by inoculation." The Medical Board have previously brought this subject to the special notice of Government, in their letter No. 965 of 1855, which renders comment here unnecessary.

Kolapore.

64. *Rutnagherry.*—The number of vaccinations performed at this Station, under the Civil Surgeon, Dr. DeCrespigney, has nearly doubled those of last year; they amount to eight hundred and sixty-two (862), being an increase of four hundred and seven (407): there is, however, a decrease of about four (4) per cent. in the average ratio of successful operations.

Rutnagherry.

Sind Division.

65. *Kurrachee.*—The Civil Surgeon, Mr. Beatty, makes no remarks for the period under review; but Table No. 2 shows an increase of eighteen (18) vaccinated over the former

Kurrachee.

year. The total of vaccinations for the year was one thousand one hundred and twenty-three (1,123); the ratio of successful cases 87·5 per cent.

Hyderabad.

66. *Hyderabad.*—At this Station there has been a diminution of one hundred and twenty-four (124) from the former year, for which no cause has been assigned by Assistant Surgeon James. Two thousand and seventy-eight (2,078) operations have been performed during the year.

Shikarpore.

67. *Shikarpore.*—At this Station also there has been a considerable falling off in the numbers vaccinated; the table shows a decrease over the former year of nine hundred and fifty-four (954). The total vaccinated during the year was nine hundred and sixty-four (964), with rather a low average of successful cases, the ratio per cent. having been 86·9.

68. No history of the progress, &c. of vaccination for 1855 has been given by the Civil Surgeon of this or either of the two foregoing Stations. The Medical Board have called the attention of the Superintending Surgeon, Sind, to this omission.

ADEN.

Aden.

69. The Acting Civil Surgeon, Dr. Collum, reports that the Vaccinator is actively employed, but the Jews refuse vaccination. Eight hundred and twenty-five (825) persons have been vaccinated during the year, being a decrease from the former year of sixty-two (62).

IV. VACCINATION UNDER THE AGENCY OF NATIVE CHIEFS.

Total Vaccinated.

Caste.

Results.

70. On reference being made to the Table No. 3, it will be observed that the total vaccinated was forty-five thousand and seventy-two (45,072); of this number twenty-four thousand one hundred and sixty-four (24,164) were males, twenty thousand nine hundred and eight (20,908) females: divided into castes, there were forty-one thousand nine hundred and thirty-five (41,935) Hindoos, three thousand and forty-seven (3,047) Mussulmans, eighty-nine (89) Christians, and one (1) Parsee. There were thirty-eight thousand three hundred and thirteen (38,313) successful cases, or a ratio of eighty-five (85) per cent., being nearly two (2) per cent. above that of the former year.

71. The total increase in the number of operations over the former year amounts to fourteen thousand five hundred and thirty-four (14,534), which cannot but be regarded as satisfactory.

72. Mr. Maitland, however, with respect to those under his supervision, states that "with the exception of the Kolapore State, vaccination has been conducted in rather an irregular and unsatisfactory manner, partly owing to want of zeal and energy in the Vaccinators themselves, and partly from unwillingness of the people. One Vaccinator in the Sattara circle of vaccination has been dismissed, and others have been admonished to exercise greater diligence." Mr. Maitland adds—"Since last Report, the Native Chieftains of Sanglee and Meeruj have consented to entertain Vaccinators. The Coomudwar Chief for some time past has entertained a man, but from dissensions in the family regarding his place of residence and his pay, little or nothing has been effected in the way of vaccination. The Chiefs in the Southern Muratha Country may be said to evince great indifference on the subject, and only consent to the payment of a Vaccinator because it is the wish of Government that they should do so."

Those employed in the Southern Deccan.

Report of Mr. Maitland.

73. The Superintendent of Vaccination Western Guzerat, Mr. Lord, thus writes regarding the Vaccinators employed by Native Chiefs—"The return of operations in this Division shows a great and highly satisfactory increase of usefulness and benefit by this means gained to the country, without any appreciable amount of expense to Government.

In the Western Division of Guzerat.

Dr. Lord's Report.

"In last year twenty-two thousand five hundred and ninety-five (22,595) children have been vaccinated by these men; for the preceding twelve months the Return showed twelve thousand and eight (12,008) as the number operated on, the increase being ten thousand five hundred and eighty-seven (10,587).

"The Guicowar alone, of all important Native Chiefs, gives no aid towards this good work, and leaves his sick and densely populated towns and districts in this Division to be provided for as best they may, by the few Government Vaccinators who can be spared for this work, but who are quite inadequate to the efficient performance of it.

"Instances of opposition to vaccination are still not unfrequent, but it is to be hoped that time, and above all education, if once successfully established, will tend to remove the prejudices opposed to its general adoption.

"I trust the shortness of time I have been in my present office will serve as an excuse for the brevity of this Report."

74. Dr. Peach, Superintendent of Eastern Guzerat, states—"The four Vaccinators employed by the Guicowar of Baroda, who formerly reported to the Superintendent Eastern Division Guzerat, were in September last transferred to the charge of the Residency Surgeon, Baroda;

In the Eastern Division of Guzerat.

Report of Dr. Peach.

therefore the work performed by them during the last year is only shown for eight months in these Returns.

75. "The Political Agent in the Rewa Khanta, fully aware of the benefits afforded by vaccination, has increased the establishment maintained by the Chiefs in that part of the Division from two to eight Vaccinators; and the Assistant Political Agent has recently established four additional Vaccinators in the Rajpeepla territory. These men, with one or two exceptions, are without experience, and some time will probably elapse before they are brought into good working order. They have very lately been sent to their respective Stations, so that, as yet, I have had no opportunity of judging what amount of work they may hereafter accomplish.

Increase of 10 Vaccinators.

76. "In the districts of this portion of the Division bordering on the British territory, and in the larger villages and towns, it is probable that vaccination will make progress; but in the more distant parts of the country I anticipate much trouble and opposition to vaccination, owing to the scattered population, the wild character of the country, and the almost savage condition of the inhabitants, who are, I believe, chiefly Bheels, and who cannot be supposed to appreciate the advantages of the operations."

77. *Peint State.*—Eight hundred and ninety (890) vaccinations have been performed during the year. The Civil Surgeon, Nassick, reports "that the difficulty of travelling during the rains in such a malarious, jungly district, where fever and bowel-complaints are prevalent, is a great hindrance to vaccination. The Vaccinator is zealous."

Peint State.

78. *Sawunt Warree.*—There is a decrease of one thousand nine hundred and eighty-eight (1,988) in the operations performed under Sub-Assistant Surgeon Spencer from last year; four thousand six hundred and seventy-five (4,675) persons were vaccinated during the year. As the decrease has not been satisfactorily accounted for, the Superintending Surgeon Southern Division has been requested to inquire into the causes of the diminution.

Sawunt Warree.

V. GENERAL ABSTRACT OF VACCINATION.

79. Table No. 4 exhibits a total number vaccinated during the year of two hundred and fifty-nine thousand seven hundred and sixty-six (259,766) (exclusive of operations performed by Regimental Medical Officers, which are not embodied in this Report). Of these, one hundred and seventy-six thousand three hundred and eighty-nine (176,389) were performed by the establishments of Superintendents, thirty-eight thousand three hundred and five (38,305) by

Total number of Vaccinations performed during the year.

those of Civil Surgeons, and forty-five thousand and seventy-two (45,072) by the agency of Native Chiefs. There has been a considerable increase of numbers vaccinated in each of these three classes, and a total increase over the former year of twenty-five thousand three hundred and twenty-eight (25,328).

Increase over former year, &c.

80. Table No. 4 shows a preponderance in males: thus there were one hundred and forty-two thousand seven hundred and eighty-three (142,783) males, and one hundred and sixteen thousand nine hundred and eighty-three (116,983) females vaccinated, being an excess of twenty-five thousand and eight hundred (25,800) in the former, or about 54·9 per cent. of males and 45 per cent. of females.

Preponderance of Male sex.

81. It will be observed that at two places only has the number of females vaccinated been greater than the males: these are Peint and Sawunt Warree. At the latter Station, however, where there is only an excess of one, the sexes might be said to be equal.

Exception.

82. As to caste, the Hindoos far exceed any other class: their numbers amounted to two hundred and nineteen thousand six hundred and seventy-one (219,671), or 84·5 per cent.; Mussulmans thirty-seven thousand four hundred and forty-four (37,444), or 14·4 per cent.; Christians two thousand and fifty-nine (2,059), or 0·7 per cent.; Parsees five hundred and thirty-two (532), or 0·2 per cent.; other castes 60, or 0·02 per cent.

Hindoos far exceed any other Class.

83. The small number of Parsees vaccinated in proportion to the great numbers of that class in Bombay and elsewhere, has often attracted the Medical Board's attention, and though there is a small increase in numbers vaccinated, of two hundred and fifty-nine (259) over the former year, yet so great a disproportion as this is much to be deplored, as by their intelligence, superior education, and means, they might be expected to influence and show a good example to the poorer and less enlightened classes, instead of which, they stand alone in forming the only class in which the valuable prophylactic has not been disseminated progressively, and with steadily increasing numbers for many years past.

Disproportion of Parsees to extent of Population, &c.

84. Table No. 4 shows the following results of vaccination for the year. Of two hundred and fifty-nine thousand seven hundred and sixty-six (259,766) persons vaccinated, two hundred and thirty-two thousand six hundred and forty-four (232,644) were successful operations, or 89·5 per cent., whilst nine thousand and seventy-two (9,072) were unsuccessful, and eighteen thousand and fifty (18,050) were doubtful.

General Results of the year.

85. Inclusive of Superintendents' salaries and all other charges, the cost of every one hundred (100) persons vaccinated is Rupees twenty-six, four annas, and one pie (26-4-1). If persons vaccinated by the Native Chiefs be included, then the cost is Rupees twenty-one, eleven annas, and two pies (21-11-2), or Rupees two, seven annas, and three pies (2-7-3) below that of the former year.

Cost of Vaccination, &c.

Character, &c. of Vaccine Lymph.

86. The quality and supply of lymph generally has been good, and sufficient; instances of its deterioration are very few, and whenever this did occur, a fresh supply was received from the nearest source without loss of time.

Lymph has generally been good and sufficient.

VI. SMALL-POX.

87. In some districts small-pox has been prevalent, but exact data are not afforded as to the extent to which the disease was present. In the Northern Deccan twelve thousand two hundred and sixty-eight (12,268) cases of natural small-pox are said to have occurred in nine months, the mortality being 13·22 per cent. The disease seems to have broken out in some districts of the Southern Deccan. Mr. Maitland states that every means were taken by him and his Assistants to arrest its progress.

Small-pox in the Districts.

88. On reference to Table No. 5, it will be observed that only nine cases of small-pox occurred amongst European Troops, strength eight thousand seven hundred and eighteen (8,718), seven of which were in the Poona Division, one in the Presidency, and one in the Southern Division; of these two died, or 22·2 per cent. to treated. Amongst the Native Troops, strength thirty-two thousand nine hundred and three (32,903), fifty-nine cases have been seen, and Aden is the only Division where the disease was not noticed; of the above number, three died, or 5·1 per cent. to treated. Amongst prisoners in Jails, strength five thousand eight hundred and seventy-one (5,871), only six cases occurred, and no deaths. In Civil Hospitals one hundred and forty-five (145) cases were seen; of these forty-eight died, or 33·1 per cent. to treated. In Dispensaries there were twenty-one (21) cases, and three deaths, or 14·2 per cent. to treated. The greatest number of admissions was at the Presidency in the Jamsetjee Jejeebhoy Hospital, and, as might be expected, in the poorer classes who apply there for admission the mortality was considerable. In Sind, the ratio per cent. of deaths to treated was 50·0, at the Presidency 34·6, and at Aden 31·5.

Small-pox amongst European and Native Troops, Jails, &c.

89. The information thus conveyed is instructive, as showing the protective powers of the vaccine virus, especially in reference to Jails, where amongst five thousand eight hundred and seventy-one (5,871) prisoners in the different Jails of this Presidency, only six (6) cases of small-pox have occurred, and no deaths; whereas experience proves that the appearance of the disease amongst a similar body of men, if unprotected by vaccination, is invariably attended with great mortality, and its progress is with difficulty arrested.

Immunity of Jails from Small-pox, &c.

90. Excepting in the Concan, and at Kolapore, inoculation is not noticed as having interfered with the progress of vaccination, and there is reason to hope that steady perseverance in enforcing the rules for its repression will soon render this baneful practice unknown in all parts.

Inoculation has not interfered with the progress of Vaccination to any extent.

VII. MISCELLANEOUS REMARKS.

91. Some Medical Officers still advert to the desirableness of having Peons to assist them in carrying on their work; but the Medical Board trust the provisions of Clause 19 of the printed Rules, and Government Circular, Territorial Department, No. 621 of 1854, will meet all requirements on this head; and no complaints have been made of District Authorities withholding such aid whenever it has been asked.

Want of Peons, &c.

92. The Medical Board, in para. 154 of last year's Report, spoke doubtfully as to the results of reducing the number of Peons, but they conceive there is now reason to think that the change has been attended with benefit.

Medical Board's opinion regarding the diminution of Peons.

93. In illustration of the grounds on which they have come to this conclusion, it may be interesting briefly to show the proportionate increase which has thus taken place, first explaining that the year 1851 was the last in which the Peons were employed.

Gradual Increase in numbers vaccinated during five years.

In 1851	the numbers vaccinated	were	82,631
In 1852	„	„	166,403
In 1853	„	„	202,587
In 1854	„	„	234,438
In 1855	„	„	259,766

94. In tracing the increase thus exhibited, it will be seen that the substitution of Assistant Vaccinators for a corresponding number of Peons, was attended in the first year (1852) by an increase of more than double the numbers vaccinated, whilst in the

The same subject.

year following (1853) the increase was great; this, however, was partly caused by the introduction of the new scheme towards the end of the year. In the two last years of 1854-55 the new rules have been in full operation, and the numbers have been steadily increasing. If the work done in 1855 be compared with that of 1851, the year preceding that on which the Peons were diminished and additional Vaccinators substituted, there will be found the large increase of one hundred and seventy-seven thousand one hundred and thirty-five (177,135) persons vaccinated. In five years nine hundred and forty-five thousand eight hundred and fifty-five (945,855) persons have been vaccinated.

Authority of the Superintendent not understood, &c.

95. The Superintendent of Vaccination Northern Deccan Division has stated in his remarks, vide Clause 25, "that the authority of the Superintendent with respect to vaccination is but little understood," and at clause 40, page 10, of the Report for 1854, he suggested a remedy. The Medical Board, however, conceive, that the provisions of Clauses 27 and 28 of the printed Vaccination Rules will be sufficient to evidence to the people the desires of Government, and that the Zahirnama there referred to is adequate authority for Vaccinators to carry on their work in any village or district.

The services of Superintendents and conduct of their Establishments.

96. There have been comparatively few complaints by Medical Officers of the conduct of their Establishments. Superintendents have been zealous in looking after the verification of their Returns, and in the discharge of their duties generally.

The same with regard to Civil Surgeons and others.

97. Civil Surgeons have not been wanting in their efforts to promote the dissemination of vaccination, and the members of the Subordinate Medical Establishment on whom this duty devolved, have for the most part exhibited much interest in the cause.

Increase of numbers of Vaccinators under Native Chiefs.

98. The increase to the establishments of the Chiefs in the Rewa Khanta and Rajpeepla territory, alluded to at para. 75, is encouraging. Success must follow if these Vaccinators be supervised in the manner alluded to in para. 23 of the Vaccination Report for the year 1853, viz. by Divisional Superintendents; and it is gratifying to observe that in most instances this is now the case.

The results of the year considered satisfactory, &c.

99. On the whole, the Medical Board would record their opinion, that the experience of the past year shows that the system which is now in operation is working satisfactorily, and that the rules in force, if zealously carried out, are well calculated to ensure efficiency, in both moveable and fixed establishments, with exception of the Presidency, which will form a distinct subject for consideration and report.

100. It must not, however, be forgotten, that vaccination has had, and still has, great prejudices and opposition to encounter, and it is of the last importance that it should be presented for public acceptance in the manner most calculated to soften and subdue the prejudices of an unwilling people.

Difficulties remain to be encountered, &c.

101. In endeavouring to ensure its universal adoption in this country, it has been deemed most politic to have recourse to measures of persuasion and encouragement; and whilst the Medical Board would urge upon all Medical Officers engaged in the cause of vaccination the importance of exercising unremitting zeal and energy in the discharge of their duties, it is yet of the utmost importance that no opportunity should ever be lost by Government servants not only of voluntarily using their best efforts to dispel error and prejudices from the minds of the people on all occasions of mixing with the Natives in daily matters of duty, but also of rendering prompt assistance when specially called upon for aid by Superintendents or other Medical Officers engaged in vaccination.

The measures adopted for the dissemination of Vaccination, &c.

Exhortation to Medical Officers.

The importance of all Government Servants interesting themselves in the cause of Vaccination.

102. The Medical Board are convinced that there is no measure which bears more directly or decidedly on the achievement of success in vaccination than this, and they cannot but hope that liberal and extensive aid will thus be afforded.

The same subject.

103. In making these remarks, the Medical Board have not overlooked Government Circular No. 1220 of 1855, and other very necessary orders of Government on this head; but in reference to the statements of some Superintendents before adverted to, they think this a fitting time again pointedly to refer to a matter of such moment, in the hope of ensuring, year by year, increasing zeal and interest on the part of Civil and Political Authorities in the cause of vaccination.

Reference is made to Government Orders, &c.

104. Furthermore, the Medical Board deem it worthy the consideration of Government, whether, in aid of hortatory measures, some disqualifications, as tending to indirect compulsion, might not with benefit be imposed on the community, in view of leading to the desired end, such as that vaccination be made essential to their admission into schools, &c. &c., and into Government employ generally.

Indirect compulsion, by means of imposing certain disadvantages on the Community.

105. The Medical Board have adopted the necessary measures for procuring information regarding ages, area of each Superintendent's charge, &c., alluded to in para. 4 of Government Resolution dated 26th April 1856,

which they hope to be able to give in future Reports. They will also supply the additional information there called for whenever the Census may be completed.

I have the honour to be,
Sir,
Your most obedient Servant,

F. MANISTY, Surgeon,
Secretary Medical Board.

Bombay, Medical Board Office,
4th September 1856.

RESOLUTION OF GOVERNMENT,

DATED THE 7TH JANUARY 1857.

1. The thanks of Government should be communicated to the Medical Board for this Report, printed copies of which should be distributed, as usual, for general information, a sufficient number being furnished to Government for transmission to the Honorable Court.

2. With reference to para. 104 of the Report, the Medical Board should be referred to their letters Nos. 4556 and 149, dated respectively the 31st December 1853 and 21st January 1854, and informed, that the proposal therein submitted, for making Vaccination an indispensable condition of employment under Government, has been referred by the Government of India for the consideration of the Honorable Court of Directors, whose orders are still awaited.

3. The opinion of the Acting Director of Public Instruction should be requested as to the advisability of making Vaccination essential to the admission of children into schools, as suggested by the Medical Board.

4. In reporting these proceedings to the Honorable Court, which should be done at once, their attention should be solicited to paras. 22 and 23 of the letter from this Government, No. 40, dated 26th April 1856, with an expression of the hope of this Government, that they will deem it right to sanction the early introduction of the rules previously recommended, which will be attended with no difficulty in this Presidency.

(Signed) W. HART,
Secretary to Government.

APPENDIX.

ANNUAL RETURN

FORM

Return of Persons Vaccinated at this Presidency and Subordinate

STATIONS.	RANK AND NAMES.	CHRISTIANS.			
		Europeans.		Natives.	
		Male.	Female.	Male.	Female.
Ahmedabad	Assistant Surgeon J. M. Bowie	2	6	..	..
Ahmednuggur	„ J. G. Fraser	1	..	1	7
Alibaugh	Apothecary M. Hearn	..	..	..	..
Aden	Surgeon R. Collum, M.D	2	..	2	1
Broach	Assistant Sergeon J. Bean	..	..	..	..
Bhooj Dispensary	Sub-Asst. Surgeon S. Hemraj	..	..	..	..
Bandora „	„ Mesquitta	..	..	5	5
Belgaum	Surgeon T. Waller	11	4	17	9
Bushire	Assistant Surgeon J. McAlister	8	..	..	..
Baroda*	„ W. Peach, M.D	..	..	..	..
Dhoolia	„ M. M. McKenzie	1	..	2	1
Dharwar	Surgeon G. F. Forbes	1	..	2	3
Deccan, Northern	Assistant Surgeon W. Davey	..	..	1	..
Deccan, Southern	„ G. G. W. Maitland	..	..	11	5
Deccan, Southern*	„ G. G. W. Maitland	..	..	1	1
Guzerat, Western	„ R. G. Lord, M.D.	..	..	..	..
Guzerat, Eastern	„ W. Peach, M.D.	4	1	..	..
Hyderabad	„ R. W. James, M.D.	1	..	2	..
Jerruck	First Hosp. Assist. J. M. Carlos	..	..	..	..
Kolapore	Assistant Surgeon F. Broughton	1	..	2	..
Konkan	„ F. W. Harris	..	..	74	60
Khittee	First Hosp. Assist. Gopali Jadow	..	..	..	..
Kaira	Assistant Surgeon T. Young (the late)	1	..	..	..
Kurrachee	„ T. B. Beatty	26	8	16	8
Kurrachee Dispensary	Sub-Asst. Surgeon A. Chundroba	..	..	..	..
Larkhana	Assistant Apothecary French	..	..	..	..
Mahableshwur	Surgeon J. W. Winchester	6	5	2	5
Meerpore	First Hosp. Assist. Moolla Oomer	..	..	..	..
Meerpore Buttora		..	..	..	..
Mahomed Khan's Tanda	First Hosp. Assist. J. Thompson	..	..	..	..
Mahee Khanta*	Assistant Surgeon R. G. Lord, M.D	..	..	..	..
Nassick	„ S. M. Pelly	2	4	..	..
Presidency Division	„ J. Peet	104	54	385	224
Poona	„ J. Keith, M.D.	23	28	19	12
Peint (Nassick)*	„ S. M. Pelly	..	..	..	..
Rajkote	„ W. F. Clay	2	7	..	..
Rewa Khanta*	„ W. Peach, M.D.	..	..	..	..
Rutnagherry	„ E. N. DeCrespigny, M.D.	3	9	2	..
Sind Division	„ R. Bayne, M.D	3	2	19	10
Sattara	„ C. G. Wiehe, M.D.	..	..	2	2
Surat	Surgeon R. Dent	1	1	..	..
Sholapore	Assistant Surgeon C. J. Sylvester, M.D.	..	..	5	..
Shikarpore	„ W. G. Hunter	1	..	..	..
Sawunt Warree*	Sub-Asst. Surgeon R. Spencer	2	..	34	18
Tanna	Assistant Surgeon A. W. Ward	..	..	7	3
Vingorla	Apothecary J. Wright	..	..	10	11
Waghotan	Assistant Apothecary W. Collins	..	..	..	..
	Total....	206	129	621	385

* Native Chiefs' establishments.

Of the above number were vaccinated
Re-vaccinated, but failed .....
Not seen after Vaccination .....

Bombay, Medical Board Office, 4th September 1856.

OF VACCINATION.

No. 55.

Stations, from the 1st April to 31st December 1855, being Nine Months.

Hindoos.				Mussulmans.		Jews.		Parsees.		Total of both Sexes.
Hindoos.		Dhers.								
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1,025	1,005	..	..	118	136	..	..	1	..	2,293
348	238	..	..	81	47	..	..	1	..	724
..	..	..	..	2	1	..	..	..	..	3
19	12	..	..	476	118	1	..	..	..	631
428	271	29	24	139	88	..	..	11	7	997
2,943	2,241	..	..	1,159	946	..	..	..	..	7,289
10	4	..	..	1	..	..	..	1	..	26
164	148	..	..	19	16	..	..	..	..	388
..	..	..	..	180	178	8	8	..	..	382
1,985	1,386	..	..	282	190	..	..	..	1	3,844
439	460	..	..	52	51	..	..	..	..	1,006
753	442	..	..	74	43	..	..	1	..	1,319
9,833	8,582	581	542	548	429	..	..	..	..	20,516
5,567	4,344	78	91	734	498	..	..	..	..	11,328
2,757	2,210	118	111	140	94	..	..	..	..	5,432
16,376	14,047	..	..	1,432	1,251	..	..	..	..	33,106
8,038	6,162	662	574	1,074	801	..	..	40	29	17,445
305	193	..	..	626	333	..	..	..	..	1,460
27	21	..	..	45	26	..	..	..	..	119
951	784	..	..	37	27	..	..	..	..	1,802
12,861	12,139	..	..	510	437	8	14	20	23	26,146
2	4	..	..	30	28	..	..	..	..	64
209	161	..	..	28	16	..	..	..	..	415
212	158	..	..	179	122	..	1	5	1	736
2	..	..	..	20	11	..	..	..	.. 1	33
34	15	..	..	55	31	..	..	..	..	135
25	15	..	..	2	5	..	..	..		66
47	28	..	..	80	78	..	..	..	..	233
..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..
9,045	8,310	..	..	650	526	..	..	..	..	18,531
607	480	..	..	15	13	..	..	..	..	1,071
2,291	1,580	291	235	783	372	..	..	70	4	6,435
578	453	..	..	50	34	..	..	6		1,206
290	280	..	..	..	..	..	..	..	..	570
697	658	..	..	244	171	..	..	..	.. 1	1,779
1,017	835	9	..	82	63	..	..	..	.. 3	2,006
379	311	..	..	..	3	..	..	..	..	706
2,155	1,508	..	..	6,238	4,356	1	..	..	..	14,292
1,112	897	..	..	27	24	54	37	..	..	2,155
339	281	..	..	61	69	..	..	4	2	758
426	186	..	..	139	44	..	..	..	..	800
259	202	..	..	202	116	1	1	..	..	782
1,718	1,757	..	..	34	38	..	..	..	..	3,601
77	70	..	..	20	16	..	..	2	5	200
31	25	..	..	4	5	..	..	..	..	86
..	..	..	..	..	..	..	..	..	..	..
86,441	72,853	1,768	1,577	16,677	11,851	73	61	162	113	192,917

successfully 173,115
..... 6,758
..... 13,044

Grand Total.. 192,917

By order of the Medical Board.

F. Manisty, Surgeon,
Secretary Medical Board.

TABLE

VACCINATION UNDER

Table of Divisional Vaccination, showing the Number and Names of the Divisions, and performed, and compared with those of last Year; the Total Number arranged according Number of Operations performed by each Vaccinator; the Pay of Vaccinators; and the

Number.	Divisions.	Names of the Medical Officers, Superintendents of Vaccination.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.		
					1854.	Increase.	Decrease.
1	Presidency	Asst. Surg. J. Peet	10	8,494	6,909	1,585	..
2	Konkan.....	„ F. W. Harris	18	35,955	33,452	2,503	..
3	Northern Deccan..	„ W. Davey	18	26,490	24,024	2,466	..
4	Southern Deccan..	„ G. G. W. Maitland..	18	16,208	23,205	..	6,997
5	Western Guzerat..	„ R. G. Lord, M.D...	23	45,156	38,295	6,861	..
6	Eastern Guzerat..	„ W. Peach, M.D....	17	23,277	19,889	3,388	..
7	Sind	„ R. Bayne, M.D....	15	20,809	23,457	..	2,648
		Total....	119	176,389	169,231	7,158	..

No. 1.

Superintendents.

their Superintendents; the Number of Vaccinators employed; the Total Vaccinations to Sex, Caste, and Result; the Ratio of Successful to Total Vaccinated; the Average Average Cost of every Hundred Persons Vaccinated, for the Year 1855.

Total Number Vaccinated, arranged according to Sex.		Total Number Vaccinated, arranged according to Caste.					Total Number Vaccinated, arranged according to Result.			Ratio per Cent. of Successful to Number Vaccinated.	Average Number of Persons Vaccinated by each Vaccinator.	Pay of Native Vaccinators.	Average Cost of every 100 Persons Vaccinated, exclusive of the Superintendents' Pay & Allowances.		
Male.	Female.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Successful.	Unsuccessful.	Doubtful.						
												Rs.	*Rs.*	*a.*	*p.*
5,210	3,284	5,504	1,617	1,171	202	..	7,532	123	839	88·6	849	1,608	18	14	10
18,547	17,408	34,583	1,125	170	43	34	33,852	1,040	1,063	94·1	1,997	2,784	7	11	10
14,100	12,390	25,236	1,247	7	..	..	25,206	163	1,121	95·1	1,471	2,784	10	8	1
9,123	7,085	14,354	1,831	19	4	..	14,724	439	1,045	90·8	900	2,784	17	2	9
24,263	20,893	41,396	3,760	..	..	..	38,524	1,915	4,717	85·3	1,963	3,408	7	8	9
13,252	10,025	20,865	2,308	5	99	..	20,427	1,311	1,539	87·7	1,369	2,640	11	5	5
12,175	8,634	7,068	13,703	37	..	1	19,067	317	1,425	91·6	1,387	2,352	11	3	7
96,670	79,719	149,006	25,591	1,409	348	35	159,332	5,308	11,749	90·3	1,482	18,360	10	6	6

TABLE

VACCINATION UNDER

Table of Vaccination under Civil Surgeons and others, arranged

Number.	Superintending Surgeons' Divisions.	Civil Stations.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.		
					1854.	Increase.	Decrease.
1	Presidency	Tanna	1	278	191	87	..
		Alibaugh	..	5	34	..	29
		Bandora Dispensary	..	41	35	6	..
		Total..	1	324	260	64	..
2	Poona	Poona	1	1,594	1,438	156	..
		Ahmednuggur	1	947	830	117	..
		Sattara	1	3,134	3,341	..	207
		Dhoolia	1	1,510	681	829	..
		Nassick	1	1,390	1,255	135	..
		Mahableshwur	..	66	175	..	109
		Total..	5	8,641	7,720	921	..
3	Northern	Ahmedabad	1	3,208	3,117	91	..
		Kaira	1	684	949	..	265
		Rajkote	1	2,486	2,503	..	17
		Surat	1	1,070	1,194	..	124
		Broach	1	1,534	1,273	261	..
		Bhooj Dispensary	..	7,345	218	7,127	..
		Total..	5	16,327	9,254	7,073	..
4	Southern	Belgaum	1	667	1,322	..	655
		Dharwar	1	1,815	2,470	..	655
		Sholapore	1	1,088	813	275	..
		Kolapore	1	2,438	3,548	..	1,110
		Rutnagherry	1	862	455	407	..
		Vingorla	..	102	243	..	141
		Waghotan	..	..	..	..	..
		Total..	5	6,972	8,851	..	1,879
5	Sind	Kurrachee	1	1,123	1,105	18	..
		Hyderabad	1	2,078	2,202	..	124
		Shikarpoor	1	964	1,918	..	954
		Kurrachee Dispensary	..	112	482	..	370
		Larkhana	..	135	12	123	..
		Jerruck	..	119	77	42	..
		Meerpoor	..	239	1,463	..	1,224
		Meerpoor Buttora	..	..	146	..	..
		Mahomed Khan's Tanda	..	..	13	..	..
		Khittee	..	64	..	..	..
		Total..	3	4,834	7,418	..	2,584
6	Aden	Aden	1	825	887	..	62
7	Persian Gulf	Bushire (from April 1855 to March 1856)	..	382	279	102	..
		Grand Total..	20	38,305	34,669	3,636	..

No. 2.

Civil Surgeons and others.

according to Divisions, and showing the Details as in Table No. 1, for the Year 1855.

Total Number Vaccinated, arranged according to Sex.		Total Number Vaccinated arranged according to Caste.					Total Number Vaccinated arranged according to Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of Persons Vaccinated by each Vaccinator.	Pay of Native Vaccinators per Annum.	Average Cost of every 100 Persons Vaccinated, exclusive of Medical Officers' Pay and Allowances.
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Successful.	Unsuccessful.	Doubtful.				
												Rs.	*Rs. a. p.*
150	128	198	51	18	11	..	206	60	12	74·1	278	108	38 13 6
2	3	..	5	..	..	..	5	..	..	100·0	..	..	....
24	17	15	1	24	1	..	28	..	13	68·2	..	..	....
176	148	213	57	42	12	..	239	60	25	73·7	278	108	38 13 6
890	704	1,328	121	131	13	1	1,307	62	225	82·0	1,594	216	13 8 9
554	393	754	168	24	1	..	913	16	18	96·4	947	108	11 6 5
1,713	1,421	2,929	106	8	91	..	2,867	..	267	91·4	3,134	216	6 14 3
775	735	1,330	174	6	..	..	1,449	6	55	95·9	1,510	144	9 8 6
822	568	1,347	37	6	..	..	1,091	33	266	78·4	1,390	108	7 12 3
35	31	40	7	18	1	..	59	4	3	89·4	..	..	....
4,789	3,852	7,728	613	193	106	1	7,686	121	834	88·9	1,715	792	9 3 9
1,636	1,572	2,781	413	12	2	..	2,935	171	102	91·4	3,208	288	8 15 7
380	304	604	77	2	1	..	654	12	18	95·1	684	108	15 12 7
1,363	1,123	1,886	589	10	1	..	2,313	67	106	93·0	2,486	108	4 5 2
583	487	819	227	4	20	..	978	86	6	91·4	1,070	216	20 2 11
921	613	1,139	370	..	25	..	1,412	60	62	92·0	1,534	108	7 0 7
4,137	3,208	5,227	2,118	..	..	..	7,046	..	299	95·8	..	..	....
9,020	7,307	12,456	3,794	28	49	..	15,338	396	593	93·9	1,796	828	9 2 5
373	294	482	63	120	2	..	617	33	17	92·5	667	108	16 3 0
1,125	690	1,650	156	8	1	..	1,613	110	92	88·8	1,815	108	5 15 2
768	320	770	305	6	7	..	908	2	178	83·4	1,088	108	9 14 9
1,307	1,131	2,350	84	4	..	..	2,228	49	161	91·3	2,438	216	8 13 9
472	390	832	14	16	..	..	801	61	..	92·9	862	108	12 8 5
54	48	67	13	22	..	..	102	..	..	100·0	..	..	....
..	..	..	..	..	..	..	..	..	..	..	..	..	....
4,099	2,873	6,151	635	176	10	..	6,269	255	448	89·9	1,374	648	9 6 11
722	401	499	523	94	6	1	983	70	70	87·5	1,123	108	9 9 10
1,330	748	844	1,231	3	..	..	1,937	73	68	93·2	2,078	108	5 3 1
582	382	611	350	1	..	2	838	111	15	86·9	964	108	11 3 3
66	46	7	99	6	..	..	99	6	7	88·3	..	..	....
89	46	49	86	..	..	..	83	42	10	61·4	..	..	....
72	47	48	71	..	..	..	89	30	..	74·7	..	..	....
130	109	75	164	..	..	..	185	14	40	77·4	..	..	....
..	..	..	..	..	..	..	..	..	..	..	..	..	....
..	..	..	..	..	..	..	..	..	..	..	..	..	....
32	32	6	58	..	..	..	48	4	12	75·0	..	..	....
3,023	1,811	2,139	2,582	104	6	3	4,262	350	222	88·1	1,388	324	7 12 5
646	179	43	707	10	..	5	825	..	..	100·0	825	108	13 1 5
196	186	..	358	8	..	16	380	2	..	99·4	..	..	....
21,949	16,356	28,730	8,806	561	183	25	34,999	1,184	2,122	91·3	1,485	2,808	9 7 3

TABLE

VACCINATION UNDER

Table of Vaccination through the agency of the Native Chiefs, arranged according to the exception of Pay of Vaccinators

Number.	DIVISIONS.	STATIONS.	MEDICAL OFFICERS.	Number of Native Vaccinators attached.	Total Number Vaccinated.
1	SOUTHERN DIVISION.	Kolapore, &c.....	Asst. Surgeon Maitland.....	10	7,604
2	WESTERN GUZERAT..	Mahee Kanta	„ Lord	10	22,595
3	EASTERN GUZERAT	Baroda, (from January to August 1855)....	„ Peach, M.D.	4	6,257
		Rewa Kanta		8	3,051
4	NORTHERN DECCAN..	Peint (Nassick)	„ Pelly	1	890
5	SOUTHERN DECCAN..	Sawunt Warree	Sub-Asst. Surgeon Spencer ..	1	4,675
			Total..	34	45,072

No. 3.

Native Chiefs' agency.

the Divisions of Vaccination, and showing Details as in Tables No. 1 and 2, with and Cost of Vaccination, for the Year 1855.

Compared with last Year.			Total Number Vaccinated, arranged according to Sex.		Total Number Vaccinated, arranged according to Caste.					Total Number Vaccinated arranged according to Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of Persons Vaccinated by each Vaccinator.
1854.	Increase.	Decrease.	Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Successful.	Unsuccessful.	Doubtful.		
5,765	1,839	..	4,126	3,478	7,274	328	2	..	..	6,481	256	867	85·2	760
12,008	10,587	..	11,796	10,799	21,053	1,542	..	..	..	19,612	917	2,066	86·7	2,259
5,745	512	..	3,768	2,489	5,527	729	..	1	..	4,719	640	898	75·4	1,564
327	2,724	..	1,698	1,353	2,896	155	..	..	..	2,539	397	115	83·3	381
30	860	..	439	451	890	..	..	..	..	776	47	67	87·2	890
6,663	..	1,088	2,337	2,338	4,295	293	87	..	..	4,186	323	166	89·5	4,675
30,538	14,534	..	24,164	20,908	41,935	3,047	89	1	..	38,313	2,580	4,179	85·0	1,325

TABLE

General Abstract of Vaccination

Designation of Tables.	Total Number Vaccinated.	Compared with last year.		
		1854.	Increase.	Decrease.
No. 1, Vaccination under Superintendents	176,389	169,231	7,158	....
No. 2, Ditto under Civil Surgeons, &c.	38,305	34,669	3,636	....
No. 3, Ditto by the Native Chiefs' agency	45,072	30,538	14,534	....
Total..	259,766	234,438	25,328	....

No. 4.

FOR THE YEAR 1855.

Total Number Vaccinated arranged according to Sex.		Total Number Vaccinated arranged according to Caste.					Total Number Vaccinated arranged according to Result.			Ratio per Cent. of Successful to Number Vaccinated.
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Successful.	Unsuccessful.	Doubtful.	
96,670	79,719	149,006	25,591	1,409	348	35	159,332	5,308	11,749	90·3
21,949	16,356	28,730	8,806	561	183	25	34,999	1,184	2,122	91·3
24,164	20,908	41,935	3,047	89	1	..	38,313	2,580	4,179	85·0
142,783	116,983	219,671	37,444	2,059	532	60	232,644	9,072	18,050	89·5

TABLE

SMALL-

Table showing the Admissions and Deaths from Small-pox amongst European and
of the Bombay Presidency, with the Percentage of Deaths to Strength

Divisions.	European Troops.									Native Troops.								
	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to		Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to	
								Strength.	Treated.								Strength.	Treated.
Presidency Division	797	..	1	1	..	1	..	0·1	100·0	3,340	..	24	24	22	2	..	0·06	8·3
Poona „	2,740	..	7	7	7	..	..	..	..	7,406	..	2	2	2	..	..	..	..
Northern „	531	..	..	..	..	..	..	..	..	6,549	..	12	12	12	..	..	..	..
Southern „	1,295	..	1	1	..	1	..	0·07	100·0	4,312	..	2	2	2	..	..	..	..
Sind „	2,621	..	..	..	..	..	..	..	..	6,819	1	6	7	6	1	..	0·01	14·3
Rajpootana Field Force.	106	..	..	..	..	..	..	..	..	5,391	..	12	12	10	..	2	..	..
Aden	628	..	..	..	..	..	..	..	..	1,086	..	..	..	..	..	..	..	..
Total..	8,718	..	9	9	7	2	..	0·02	22·2	32,903	1	58	59	54	3	2	0·01	5·1

Abstract.

Divisions.	Remained.	Admitted.
Presidency Division	2	126
Poona „	..	12
Northern „	..	12
Southern „	..	11
Sind „	3	24
Rajpootana Field Force..	..	12
Aden	..	38
Total..	5	235

No. 5.

Pox.

Native Troops, Prisoners in Jails, Civil Hospitals, and Dispensaries, in each Division and to Treated; and an Abstract of the whole for the Year 1855.

Prisoners in Jails.									Civil Hospitals.									Dispensaries.								
Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to		Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to		Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to	
							Strength.	Treated.								Strength.	Treated.								Strength.	Treated.
917	..	..	..	..	..	..	..	..	Unknown and variable.	2	99	101	65	35	1	..	34·6	Unknown and variable.	..	2	2	2	..	..	..	..
1,260	..	..	..	..	..	..	..	..		..	2	2	2	..	..	..	..		..	1	1	1	..	..	..	..
863	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..
1,470	..	3	3	3	..	..	..	..		..	2	2	2	..	..	..	..		..	3	3	3	..	..	..	..
1,188	..	3	3	3	..	..	..	..		..	2	2	1	1	..	..	50·0		2	13	15	11	3	1	..	20·0
..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..
173	..	..	..	..	..	..	..	..		..	38	38	22	12	4	..	31·5		..	..	..	..	..	..	..	..
5,871	..	6	6	6	..	..	..	..		2	143	145	92	48	5	..	33·1		2	19	21	17	3	1	..	14·2

Total.	Discharged.	Died.	Remaining.	Per centage of Deaths to Treated.
128	89	38	1	29·6
12	12	..	..	..
12	12	..	..	..
11	10	1	..	9·1
27	21	5	1	18·5
12	10	..	2	..
38	22	12	4	31·5
240	176	56	8	23·3

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR THE YEARS 1856-57.

Bombay:
PRINTED FOR GOVERNMENT
AT THE
EDUCATION SOCIETY'S PRESS, BYCULLA.

1858.

133637

INDEX

TO THE

REPORT ON VACCINATION FOR 1856 AND 1857.

PAGE

Introductory observations 1
General Results of Vaccination in 1856 and 1857 4
Vaccination under Superintendents of Divisions 6
Presidency Division 6
Concan do 7
Northern Deccan do 12
Southern Deccan do 14
Western Guzerat do 17
Eastern Guzerat do 28
Sind do 29
Kattywar do 31
Vaccination under Civil Surgeons and others 34
PRESIDENCY DIVISION.
Tanna 35
Alibaugh 37
Bandora Dispensary 37
POONA DIVISION.
Poona 38
Ahmednuggur 39
Sattara 40
Dhoolia 41
Nassick 43
Mahableshwur 44, 75
Report of the Superintending Surgeon 44
NORTHERN DIVISION.
Ahmedabad 46
Kaira 47
Surat 47
Broach 48

PAGE

NORTHERN DIVISION (*continued*).
Bhooj 50
Rajcote 51
Report of the Superintending Surgeon 51
SOUTHERN DIVISION.
Belgaum 52
Dharwar 53
Sholapore.. 54
Kolapore 55
Rutnagherry 57
Vingorla 58
Report of the Superintending Surgeon 58
SIND DIVISION.
Kurrachee 60
Ditto Jail 60
Ditto Dispensary 63
Hydrabad.. 61
Shikarpore 62
Other Stations in Sind 64, 65
Aden 66
Bushire 67
VACCINATION UNDER NATIVE CHIEFS' AGENCY.
Southern Deccan Division 68
Western Guzerat 70
Eastern Guzerat 72
Northern Deccan.. 73
Southern Deccan... 73
Kattywar Circle 75
Miscellaneous Remarks 76
Analysis of Tables in Appendix No. 2 83

APPENDIX No. 1.—TABLES FOR 1856 AND 1857.
Vaccination under Superintendents, 1856 and 1857 .. .. Table No. 1
Do. do. Civil Surgeons and others, 1856 .. .. do. 2
Do. do. do. do. 1857 .. .. do. 2
Do. do. Native Chiefs, 1856 and 1857 .. .. do. 3
General Abstract of Vaccination, 1856 and 1857 .. .. do. 4
Small-Pox, 1856 and 1857 .. .. do. 5
APPENDIX No. 2.—TABLES FOR 5 YEARS, 1853 TO 1857.
Vaccination under Superintendents .. .. Tables No. 1 A & B
Do. do. Civil Surgeon and others .. do. No. 2 A, B, C & D
Do. do. Native Chiefs' Agency .. do. No. 3 A & B
General Abstract of Vaccination.. .. .. do. No. 4 A & B
TABLE OF AGES FOR 1857.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

1856 AND 1857.

No. 2427 OF 1858.

From the DIRECTOR GENERAL MEDICAL DEPARTMENT,

To the SECRETARY TO GOVERNMENT,
General Department.

SIR,—I have the honour to forward the Annual Reports on Vaccination for the years 1856 and 1857, for submission to the Right Honorable the Governor in Council, and for transmission to the Home Government.

2. Circumstances, to which it is unnecessary here to allude, prevented the late Medical Board from submitting, at the usual period (about the middle of 1857), the Annual Report of the Vaccinating Establishment for the year 1856. Owing to constant calls upon my time relative to Military arrangements, I regret that I have not been able to overtake the arrears of 1856 in the Civil Department. I propose therefore to report on Vaccination during the years 1856 and 1857 throughout the Presidency, an arrangement which I trust will not be unattended with advantage. I also propose to submit returns of the vaccination proceedings of the three previous years, 1853, 1854, and 1855, and thus permit an average of the work in the Department for the last five years to be formed.

3. In former Reports the late Medical Board described very particularly the system under which vaccination is carried on in this Presidency. To this subject

Agency.

it is unnecessary therefore again to refer; but the means employed may be briefly stated as follows:—

1*st*.—By Government Vaccinators (itinerant) under Divisional Superintendents of Vaccination.

2*ndly*.—By Government Vaccinators (stationary) under Civil Surgeons.

3*rdly*.—By Native Chiefs' Vaccinators (itinerant and stationary) under Divisional Superintendents of Vaccination.

The Government Divisional Superintendents exercise control over the Vaccinators employed by Government and those entertained by Native Chiefs, whilst the Civil Surgeons have each a Vaccinator allotted to their respective Stations.

Superintendents how allotted.

4. There are eight (8) Medical Officers Divisional Superintendents of Vaccination, six (6) of whom (viz. in the Concan, Northern and Southern Deccan, Eastern and Western Guzerat, and Sind,) devote their whole time to the duties of supervision, and move with their Establishments throughout their allotted divisions during the fair season. The Superintendent of the Island of Bombay performs other duties in connection with the Jamsetjee Jejeebhoy Hospital and Grant Medical College, and the Superintendent of the newly formed Kattywar Circle is also Civil Surgeon at Rajcote.

Changes amongst the Superintendents.

5. The changes amongst the Superintendents during the years 1856 and 1857 were as follows:—Dr. Ballingall succeeded Dr. Peet at the Presidency; Dr. Beatty was appointed to the Concan in place of Dr. Harris; Dr. Johnstone took up the duties in the Southern Deccan Division from Dr. Maitland; in Sind Dr. Millar, and afterwards Dr. Martin, succeeded Dr. Bayne; Dr. Peach in the Eastern Division of Guzerat went home on sick certificate, and Dr. Davey, before completing his annual tour, or finishing his Annual Report, left for the Persian Expedition. In 1857 Dr. Mills was appointed to the Southern Deccan Division; Dr. Thorp to the Western, Dr. Bowie and afterwards Dr. Ross to the Eastern Division of Guzerat.

Effect of these Changes.

6. The only Superintendent who continued uninterruptedly at his post during 1856 and 1857 was Dr. Lord, formerly Superintendent of the Western Division, and now of the Kattywar Circle. It necessarily follows, therefore, that where changes have occurred, some hindrance to vaccination has also been the result.

Establishment.

7. There are about one hundred and twenty (120) Native Vaccinators employed under the Divisional Superintendents, twenty (20) under Civil Surgeons,

and about fifty (50) under the Native Chiefs' agency. From amongst this large number of one hundred and ninety (190) persons, many changes must necessarily have occurred during two years, owing to dismissals, deaths &c., and much variety of character and of aptitude for the discharge of their duties must have been observed.

8. In 1856 there was only one (1) death amongst the Establishment reported, but eight (8) Vaccinators were discharged the Service at their own request, and eight (8) also were dismissed on account of misbehaviour. In 1857 there were eleven (11) Vaccinators discharged, one (1) resigned, and two (2) deaths occurred. In the selection of candidates to supply their places, every care is taken by the Superintendents and by the confirming authority to obtain efficient men; nevertheless, there is reason to fear, that the small remuneration and want of pensions tend to introduce a class of persons not highly trustworthy, nor perhaps best fitted for the duties. The remedy for this state of things it is difficult to suggest; but probably if candidates were selected at an earlier age than at present—if they were entertained as probationers, for a limited period, until their qualifications and dispositions were well ascertained—and if their salaries were increased according to length of service, with also the prospect of ulterior reward by way of pension, there might be introduced gradually into the Department a class of Native Vaccinators superior to the present. Again many Vaccinators are employed in occupations foreign to the object for which they were originally entertained. In nearly every Establishment the Head Vaccinators, (or at least one of them,) is simply a Karkoon, and performs all the office work (in the Native languages) of the Superintendent; others appear to be little removed from Peons, and are engaged chiefly in bringing subjects for others of the Establishment to vaccinate; another drawback is the permission during absence on leave to find a substitute unconnected with the Department, who may or may not be qualified by skill and truthfulness to perform the duties. The introduction of such persons into a Divisional Superintendent's Establishment cannot fail to be attended with prejudicial effects.

Changes during the two years.

Class of Native Vaccinators, and how it may be improved.

Vaccinators are employed on other duties.

On leave incompetent Substitutes allowed.

9. The Director General has noticed these circumstances, which cannot fail to disorganize the Establishment, but without any intention at the present time to recommend that changes should be introduced. He would prefer for the present to leave arrangements as they are, taking care that, as far as possible the subject be not lost sight of.

No change at present recommended.

10. During the year 1856 two Vaccinators, who were upon the rolls of the Baroda Residency Hospital, were received back again on the Superintendent's Establishment North-west Division of Guzerat, an arrangement previously submitted to and sanctioned by Government.

Transfer of Guicowar's Vaccinators.

11. The only increase to the allowances of the Establishment in 1856 was at Aden, where the pay of the Station Vaccinators was raised from Rupees nine (9) to Rupees fifteen (15) a month. Travelling allowances at the rate of three (3) annas per diem were also granted to the Native Vaccinators employed in Sind.

Increased Charges.

12. At the instance of the Political Agent, Rewa Kanta, some of the Native Vaccinators were instructed, during the monsoon of 1856, in treating simple cases of fever, &c. at the Baroda Residency Hospital—a measure which was thought likely to be attended with benefit, although during this period vaccination in the Rajpeepla State was necessarily in abeyance.

Some Vaccinators taught to prescribe, &c.

13. With every desire on the part of the late Medical Board to assist in carrying out the suggestion of the Political Agent, they could not help feeling that a hasty and imperfect knowledge of medicine thus obtained, might operate prejudicially, whilst they were strongly of opinion that Native Vaccinators should be kept strictly and entirely to the legitimate object for which they are entertained.

Medical Board's views on the subject.

---

14. With these remarks the Director General proceeds to sketch generally the progress of Vaccination in 1856 and in 1857.

Vaccination in 1856 and 1857.

15. It will be observed by Table No. 4 in the Appendix, that the total number of vaccinations in 1856 fell twelve thousand one hundred and thirty-seven (12,137) below that of 1855, and that in 1857 there was also a diminution of one thousand and ten (1,010) below that of 1856.

Diminution in Numbers Vaccinated in 1856 compared with 1855, and in 1857 compared with 1856.

16. By reference to the same Table, it will be seen that had there not been an increase under the Native Chiefs' Establishment of eight thousand five hundred and ninty-one (8,591), the total decrease for 1856 would have been about twenty thousand (20,000) instead of about twelve thousand (12,000), and of this eighteen thousand (18,000) were due to the falling off of vaccination under Divisional Superintendents. It will be observ-

Why the apparent Decrease was not greater.

ed, however, that in 1857 vaccination under Superintendents was again increased by sixteen thousand one hundred and thirty-three (16,133).

Decrease where chiefly observed.

17. Upon referring to Table 1 the decrease in 1856 is seen to pervade all the Divisions, except the Southern Deccan and Eastern Guzerat, in the latter of which there was an actual increase of about three thousand (3,000). In 1857, whilst there was a falling off in all the other Divisions, there is a remarkable and gratifying increase of twenty-five thousand two hundred and twenty-six (25,226) in Sind. The diminution in Western Guzerat of seven thousand seven hundred and ten (7,710) is doubtless due to the Establishment of the Kattywar Circle, and its separation from Guzerat.

Although numbers less, yet per centage of success greater.

18. Many reasons are assigned by the Superintendents for the diminished numbers, yet the decrease is not altogether satisfactorily accounted for in either year, although there can be no doubt, that in 1855 an unusual large number of recorded vaccinations took place; still, if the ratio per cent. of successful cases is examined, it will be found to have increased each year as the total number diminished, thus in 1855 it was 89·5, in 1856 90·6, and in 1857 91·6.

Numbers vaccinated in 1856 and 1857.

19. By Table No. 4 it will be seen that the total number vaccinated under this Presidency during the year 1856 was two hundred and forty-seven thousand six hundred and twenty-nine (247,629), and of these one hundred and fifty-eight thousand two hundred and thirty-five (158,235) were performed under the Superintendents, fifty-three thousand six hundred and sixty-three (53,663) by the Native Chiefs' agency, and thirty-five thousand seven hundred and thirty-one (35,731) by Vaccinators under Civil Surgeons. In 1857 the total number vaccinated was two hundred and forty-six thousand six hundred and nineteen (246,619), of these one hundred and seventy-four thousand three hundred and sixty-eight (174,368) vaccinations were performed by Superintendents, forty-four thousand and thirteen (44,013) by Native Chiefs' agency, and twenty-two thousand two hundred and thirty-eight (22,238) by Civil Surgeons.

Proportion of Sexes.

20. The proportion of each sex varied thus: the highest proportion of males over females occurred under the Native Chiefs' agency (92 per cent. in 1856, and 91 per cent. in 1857), next under Divisional Superintendents (84·2 per cent. in 1856, and about 80 per cent. in 1857), and lastly under Civil Surgeons (73 per cent. in 1856, and 75 per cent. in 1857), the average of all the Divisions being about 84 per cent. in 1856, and 81 per cent. in 1857.

21. The great bulk of those vaccinated (as of the population generally) was Hindoos, next Mussulmans, then Christians, Parsees, and other castes, except in Sind, where a large Mussulman population exists.

Castes of the vaccinated.

22. The ratio per cent. of successful cases on the average was about 90·6 in 1856, and 91·6 in 1857, the lowest being under the Native Chiefs, about 87 and 88, and the highest in Divisional Vaccinators 91·3 and 93·1.

Ratio of successful cases.

The Reports of the several Superintendents of Divisions will now be examined.

Presidency Division.

Superintendent.—Assistant Surgeon G. R. Ballingall, M.D.

Establishment.—Ten (10) Vaccinators, at a monthly cost of Rupees one hundred and thirty-four (134).

The operations are entirely confined to the Islands of Bombay and Colaba.

The total number of persons vaccinated during the year of 1856 was seven thousand one hundred and eighty-three (7,183), a decrease of one thousand three hundred and eleven (1,311) from the preceding year. In 1857 the numbers were six thousand seven hundred and forty-seven (6,747), a decrease of four hundred and thirty-six (436) from 1856.

Presidency.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		7,562	6,909	8,494	7,183	6,747	7,379
Sex	Males	4,554	4,162	5,210	4,355	4,169	4,490
	Females.....	3,008	2,747	3,284	2,828	2,578	2,889
Caste..	Hindoos	4,661	4,504	5,504	4,972	4,094	4,747
	Mussalmans...	1,136	1,045	1,617	1,042	1,028	1,174
	Christians	1,044	689	1,171	1,049	868	964
	Parsees	243	201	202	120	173	188
	Other Castes..	478	470	..	..	584	306
Age....	Under one year.	..	..	..	..	4,044	..
	Above one year.	..	..	..	..	2,703	..
Result .	Successful	6,601	5,865	7,532	6,424	5,809	6,446
	Unsuccessful..	175	251	123	..	301	170
	Doubtful	786	793	839	759	637	763
Per centage of Success....		87·2	84·8	88·6	89·4	86·0	87·2

The Superintendent reports of the year 1856 :—

"Having only had charge of the Establishment for the latter part of the past year, I am unable to say much about the progress made. The vesicles seen were of good character, and there has been no difficulty in keeping up the supply of lymph. The principle originated by Dr. Peet, of having all the operations on the fixed days performed at the office instead of sending children to private houses, has been acted on throughout with satisfactory results. Lymph sent on points or glasses has, I believe, almost always failed, and I cannot refrain from strongly

urging the adoption of Dr. Peet's plan of establishing stations in various parts of the Island under the charge of a distinct Superintendent, as there is too much reason to doubt the accuracy of the returns of persons successfully vaccinated at their own houses. This scheme, if carried out, seems to afford the best prospect of securing trustworthy Returns."

Regarding 1857 the Superintendent states his opinion that—

"The falling off has arisen chiefly from the frequent changes which have taken place in the Establishment rendering necessary the employment of new and inexperienced hands, whose numbers were consequently few. The total of unsuccessful and doubtful cases, nine hundred and thirty-eight (938), is large, being nearly one-sixth of the whole; there is reason however to fear that the proportion of failures is even greater than this, as I am convinced that domiciliary vaccinations with dry lymph rarely succeeds. The supply of fresh lymph has been tolerably well kept up; the vesicles which I have seen being for the most part of good character and going through their course regularly."

It will be seen that the average of five years amounts to a little less than seven thousand and four hundred (7,400) a year, which is a small number of persons to be gratuitously vaccinated in Bombay, out of its large and increasing population. The subject however of vaccination in Bombay is now under reference, and no further remarks are here needed.

Concan Division.

Superintendents.—Assistant Surgeon Harris, and afterwards Beatty.

Establishment.—Eighteen (18) Vaccinators, at a monthly cost of Rupees two hundred and thirty-two (232).

The total number of persons vaccinated during the year 1856 amounted to thirty-three thousand seven hundred and ninety-eight, (33,798), being a decrease of two thousand one hundred and fifty-seven (2,157) from the previous year. The total number in 1857 was thirty-three thousand seven hundred and fifty-six (33,756), or forty-two (42) less than the previous year.

The following table shows the operations of five years and average:—

Concan.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		32,380	33,452	35,955	33,798	33,756	33,868
Sex....	Males.....	16,783	17,134	18,547	17,389	17,346	17,449
	Females.....	15,597	16,318	17,408	16,409	16,410	16,428
Caste..	Hindoos	28,054	31,785	34,583	32,111	32,297	31,766
	Mussalmans ..	1,020	610	1,125	817	1,078	930
	Christians	416	90	170	820	356	370
	Parsees	84	..	43	31	..	32
	Other Castes..	2,806	967	34	19	25	770
Age....	Under one year.	..	..	..	..	5,689	..
	Above one year.	..	..	..	..	28,067	..
Result.	Successful....	29,357	30,973	33,852	32,255	32,287	31,745
	Unsuccessful..	2,155	1,646	1,040	686	711	1,247
	Doubtful	868	833	1,063	857	758	876
Per centage of Success....		90·6	92·5	94·1	95·4	95·6	93·6

With respect to the year 1856, the Superintendent states:—

"On many occasions I have been obliged to have recourse to the Civil and Police Authorities in both Collectorates (Tanna and Rutnagherry) to render me assistance in cases where difficulties prevailed in advancing vaccination. In every instance where such was necessary, I have experienced the greatest readiness on the part of these officers to afford me every assistance in their power, and the present prosperous state of vaccination in the Concan is, I conceive, in no small degree attributable to the ready acquiescence in furthering my wishes, which invariably has been exhibited by the Civil and Police officers. The Native officers too have shown the liveliest interest in the cause of vaccination. This they have manifested both by encouraging the people, and specially by themselves setting the example in being the first to have their own children operated on. I may here state, that during the eight months I have been in charge as Superintendent, I have never once had occasion to make an official complaint against any Native Authority in either of the Collectorates.

"I think I am in a position to state, that, at present, the practice of inoculation does not exist in either the Tanna or Rutnagherry Zillahs, and if the necessary means are but used for its continued suppression, there is little reason to anticipate its recurrence. In the month of August it was brought to my notice that inoculation was being practised in certain parts of both Collectorates. A report of the same was made to the Collector and Magistrate of each Zilla, who investigated the matter, and on its being proved that inoculation had been carried on in the districts reported, orders were immediately issued for its strict prohibition. Since then no cases of inoculation, as far as I am aware, have occurred, and I know, from frequent personal interviews with the Natives (particularly of the Rutnagherry Zillah), that they are now altogether averse to have their children inoculated, and will most gladly accept vaccination. At a place called 'Bay Maule,' in the Severndroog Talooka (the village where inoculation had been carried on and reported on), the villagers themselves expressed to me their disbelief on the advantages of inoculation. The older inhabitants confidently stated their conviction that it was no safeguard or protection to their children from the baneful effects of Small-pox, and experience has taught them, that vaccination, when successfully performed, is not only a preventive to Small-pox, but that the disease, even should it appear amongst vaccinated children, occurs in a much milder form, than in those who have been inoculated, or not vaccinated at all. Besides, deaths after inoculation have occurred amongst their children, and this they have never observed from vaccination. The Tikardars are certainly most expert operators. In one village I have known a Tikardar inoculate ninety-five (95) children in a day, and all with invariable success. Their operation is always performed on the inner part of the forearm, near the bend of the elbow—a large unsightly scar always follows the pock. The Small-pox matter is inserted by means of a sharp instrument (the shape of a small razor called wastra): a few slight incisions are made in the skin, and no water is permitted to touch the child for fifteen (15) days after the matter is inserted—generally in three or four days after the matter is applied the child is seized with febrile symptoms, and soon afterwards a crop of pustules appear over the body of different degrees of extent in different subjects. The child remains in a weak and delicate state for a month, and often two after the operation. The two great objects (as far as the people are concerned), namely, the acceptance of vaccination, and a disbelief in inoculation have been attained. It therefore only remains to suppress the propagators of the latter, and this I conceive could in no more effectual way be obtained than by offering them permanent Government employment.

"During the three months I have been travelling throughout the districts I have always been treated with the greatest civility and respect by all classes of Natives. The Foujdars and Patells of the many villages I have visited, have universally shown great willingness and desire to assist me in collecting the children for vaccination, and this willingness was more to be appreciated, because their troubling themselves was altogether optional and voluntary,

they not receiving any remuneration or pay from Government. Regarding the inclination and wishes of the people on the subject of vaccination, I can confidently state, that, throughout the Rutnagherry Collectorate, (the one which I have been principally engaged in inspecting,) the ryots (with the exception of the Brahmin class) are as desirous of receiving vaccination as Government is of promoting it. Throughout every Talooka, one universal opinion was expressed to me by the Natives,—all were unanimous in wishing to have their children vaccinated, and showed the greatest anxiety that I should pronounce their children, whom they brought in numbers, to have been successfully operated on. I have repeatedly overheard the poorer class express their gratitude to Government for sending not only Vaccinators amongst them, but also an European to inspect their work. The Natives fully appreciate the visits of an European officer,—and the very circumstance of his presence imparts to their minds a degree of confidence about vaccination, which could never be attained by the periodical visits of a Native.

" I regret to say that the only hindrance and obstacle which I had to encounter, was the supineness and inactivity of the Vaccinators themselves, and the misrepresentations they continually made to me regarding the inclination of the Ryots on this subject. Formerly much difficulty arose in furthering vaccination, owing to the superstition which always has to be overcome when any novel introduction is proposed to Natives,—this has entirely ceased, and, as far as the people themselves are concerned, no difficulty or objection need be feared. But the Vaccinators being aware of the objections formerly advanced by the Ryots, have readily made it a ground of excuse for the small amount of work which many of them have, up till latterly, been doing; nor was it until I had personally visited the villages, and learned from Natives themselves their great anxiety to have Vaccinators sent amongst them, that I was unable to disprove their statements. As a proof of this I may call to notice, that, during the last two months, when I was travelling through the districts, and personally inspecting the work of the Vaccinators, the number of successful cases had increased by one thousand (1,000) and upwards.

" The lymph throughout both the Tanna and Rutnagherry Collectorates is in abundance, and of genuine quality.

" It will be observed that the number of children vaccinated in each Collectorate is not in proportion to the population. In the Rutnagherry Zilla, the population amounts to six hundred and sixty-five thousand two hundred and thirty-eight (665,238), and the number vaccinated during the last twelve months twenty-one thousand eight hundred and twenty-nine (21,829), the proportion therefore which the number vaccinated bears to the total population is 3·28 per cent. The area of the Rutnagherry Zillah is estimated at three thousand nine hundred and sixty-four (3,964) square miles, or one hundred and sixty-eight (168) souls to the square mile. The population of the Tanna Collectorate is calculated at eight hundred and fifteen thousand eight hundred and forty-nine (815,849), whilst the number vaccinated was only ten thousand four hundred and twenty-nine (10,429), exactly half the number of the Rutnagherry Zillah, though the population of the latter is less than that of Tanna by more than one hundred and fifty thousand (150,000). The area of the Tanna Collectorate is five thousand four hundred and seventy-seven (5,477) square miles. The great disproportion here shown can only be explained by the fact of the very advanced state of civilization of the Natives in the Rutnagherry Zillah, compared with that in the Tanna Collectorate, and as schools spring up, and civilization advances in the latter, so will I conceive vaccination.

" It has been before stated that, with the exception of the Brahmin class, the Ryots, especially of the Rutnagherry Zilla, are as desirous of receiving vaccination as Government is of promoting it. The Brahmins, as a body, are totally opposed to the system of vaccination: their opposition, however, is altogether founded on some foolish superstitious principles, which can only be a matter of time to eradicate. Fortunately they have no desire or inclina-

tion to extend their feelings of disapproval to the surrounding villages. It is no uncommon occurrence to meet with an insolated Brahmin village without a single child vaccinated, yet the children of the villages in the immediate neighbourhood are all secured from Small-pox. In this matter the Brahmins evidently wish to learn their experience from the results to be observed in others, and prefer for a time rather to watch the experiment practised on others, than be experimentalized upon themselves. I have, therefore, never attempted to force or intrude the Vaccinators into Brahmin villages, but have aimed at teaching them the benefits of vaccination from what they themselves may observe. For this reason I have sent the Vaccinators to villages in the neighbourhood of Brahmin ones, and have always impressed them with the knowledge that the Vaccinators are prepared to give their services in vaccinating their children when they themselves desire it.

"The conduct of the Vaccinators generally, has, during the past eight months, been satisfactory. Amongst a body of Natives left so much to themselves, and of necessity with such little supervision, it is rather a matter of surprise that the work is performed so honestly and carefully. In only one instance did I detect falsification of the nominal returns, and the offender I recommended to be degraded, believing this mode of punishment would be a surer means of deterring the others from practising similar deceptions than dismissal from the Service."

Statement showing what proportion the number of persons vaccinated in each District bears to the total population.

	Total Population.	No. Vaccinated.*	Per cent.
Rutnagherry Collectorate.....	665,238	21,829	3·28
Tanna Collectorate	815,849	10,426	1·27

Of the year 1857 the Superintendent reports :—

"During the past year, as in all the previous ones, by far the larger amount of work performed has been in the Rutnagherry Collectorate. In that Zilla alone twenty-three thousand three hundred and forty-four (23,344), whilst in the Tanna Collectorate ten thousand four hundred and twelve (10,412) children received vaccination. In the year 1856 the total number of successful vaccinations performed in the Rutnagherry Collectorate amounted to twenty-one thousand eight hundred and twenty-nine (21,829), and in the Tanna ten thousand four hundred and twenty-six (10,426). An increase of one thousand five hundred and fifteen (1,515) has occurred in the past year over the preceding in the Rutnagherry Collectorate, whilst in the Tanna Collectorate a decrease of fourteen (14) is observed in the past twelve months. It is difficult to assign any definite reason for the want of success in the Tanna Collectorate when compared with the Rutnagherry. Throughout the latter no objections whatever are shown on the part of the people, they receive the Assistant Vaccinators gladly into their villages, and acknowledge the benefit and use of the practice adopted by them. The case is far different in the Tanna Collectorate. Though the same advantages are offered, and similar care and trouble bestowed for the propagation of vaccination in this as in the Rutnagherry districts, the people nevertheless manifest a decided dislike to the practice, and if permitted would, I have little doubt, revert to the custom of inoculation. They have frequently been asked their reasons of objection, and invariably offer but one reply, viz. that inoculation is the custom used by their ancestors, and they wish to adhere to it,—they appear regardless of the advantages to be derived from a newer and better system. Nor are these objections founded on any reasonable cause. They have never seen an instance of injurious results arising from vaccination, whilst cases have occurred where

* Refers only to the number vaccinated in the Collectorates of Tanna and Rutnagherry, or a total of thirty-two thousand two hundred and fifty-five (32,255), whereas the total vaccinated in the Concan Division is thirty-three thousand seven hundred and ninety-eight (33,798).

death has ensued as the result of their inoculation. Not unfrequently have the Natives in the Tanna Collectorate expressed their surprise at not seeing the children, on whom vaccination has been performed, covered with Small-pox pustules, and until assured that such was not necessary to ensure the preservation of their children from the disease, they looked upon the operation as a failure. In this matter great care has been taken to explain to the villagers, that the appearance of healthy pustules on the arm is sufficient protection to their children from the disease of Small-pox.

"From the Tables* the great difference which exists in the age of the children vaccinated will be observed of children *above one year* the total number vaccinated was twenty-eight thousand and sixty-seven (28,067), whilst of those *below one year* the number amounted to five thousand six hundred and eighty-nine (5,689), showing a difference in favour of the former of twenty-two thousand three hundred and seventy-eight (22,378). The only reason which can be assigned for this marked difference is, that Natives generally object to have their children vaccinated until they are passed twelve months old. Gradually I believe this feeling will give way, for I have frequently shown them children of a few months old who have been vaccinated without any harm or bad result following.

"The result of the past year's work, and success of the operations are, I consider, very satisfactory. A more satisfactory result than 95 per cent. of success could hardly be looked for, and judging from the last three months' inspection of the work of the Assistant Vaccinators, I am satisfied that the reports forwarded by them are, on the whole, correct.

"The disease of Small-pox has not prevailed as an epidemic in this Division throughout the past year. From time to time reports have been forwarded of the disease having appeared in different villages in the districts; measures were always at once taken to prevent its increase as far as possible, and the children of the surrounding villages, where the disease prevailed, were speedily vaccinated. The total number of deaths from Small-pox reported to me to have occurred throughout the Division was one hundred and nineteen (119), but I am inclined to believe that this number is much underrated, and that many more deaths not reported to me must have occurred. The greatest number of deaths from this disease occurred in the month of May—forty-seven (47) deaths were reported in that month alone; during the month of March only one death was recorded. These reports of deaths from Small-pox have been forwarded to me by the Assistant Vaccinators who have comparatively little means of ascertaining the exact number of deaths which may have happened in each district. The reports therefore furnished by the Assistant Vaccinators cannot be relied on as a correct statement of the number of deaths from Small-pox.

"Inoculation as a practice does not exist generally in the Concan Division. The custom prevails to a greater extent in the Tanna than in the Rutnagherry Collectorate. In the Tulojah Talooka, Tanna Collectorate, the practice for years past universally prevailed, and till lately the villagers resisted with violence any Assistant Vaccinator attempting to enter their villages. Owing to the valuable assistance afforded to me by the present Acting Collector of Tanna, inoculation has been done away with, and vaccination has been very successfully established in that Talooka. The Koommars or Petter tribes are the people who generally carry on inoculation throughout the country. The operation is performed on the inner side at the bend of the elbow: incisions are made in the skin by a succession of taps by means of a short razor-like instrument; a small ball of cotton is then dipped into the matter of Small-pox, and this is rubbed into the incisions, a very large and unsightly sore follows this operation. No greater obstacle to vaccination exists than the practice of inoculation. The parties practising obtain a good livelihood by this means, and consequently do not fail to condemn the use of vaccination. These Koommars get from 6 pice to 4 annas, according to the wealth of the parents, for each child inoculated.

* Appendix No. 1, 1857.

"My tour of inspection commenced at the latter end of October. From that time until the end of December, the Bassein, Bhewndy, Cullian and Kolween Talookas have been visited, and the work of Vaccinators examined. The nominal returns were in every case found to be correct, and the lymph was healthy and in abundance.

"The conduct of the Assistant Vaccinators has on the whole been satisfactory during the year. One Assistant Vaccinator received his discharge on account of refusing to proceed to the Mahim Talooka; another Vaccinator was dismissed the Service for falsifying his Return. I beg to acknowledge the assistance which has always most readily been afforded by the Civil and Police Authorities in both the Tanna and Rutnagherry Collectorates."

Northern Deccan Division.

Superintendent.—Assistant Surgeon W. Davey.

Establishment.—Eighteen (18) Vaccinators, at a monthly cost of Rupees two hundred and thirty-two (232).

The total number of persons vaccinated in 1856 was twenty-two thousand six hundred and fourteen (22,614), being a decrease from the previous year of three thousand eight hundred and seventy-six (3,876). There were vaccinated in 1857 twenty thousand five hundred and sixty-three (20,563), or a diminution of two thousand and fifty-one (2,051) from 1856.

Owing to the Superintendent being hurriedly called to proceed with the Persian Expeditionary Force, the Annual Report for 1856 was not forwarded, but merely the Returns.

The following table shows the work of the last five years and average:—

Northen Deccan.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		21,108	24,024	26,490	22,614	20,563	22,959
Sex....	Males.....	11,090	12,768	14,100	12,040	10,549	12,109
	Females.....	10,018	11,256	12,390	10,574	10,014	10,850
Caste..	Hindoos	18,935	21,888	25,236	21,920	18,717	21,339
	Mussalmans ..	957	1,137	1,247	689	690	944
	Christians	7	25	7	5	9	10
	Parsees	..	..	..	..	..	..
	Other Castes..	1,209	974	..	..	1,147	666
Age....	Under one year.	..	..	..	..	3,651	..
	Above one year.	..	..	..	..	16,912	..
Result.	Successful....	18,600	22,607	25,206	21,674	19,512	21,519
	Unsuccessful..	2,063	348	163	177	187	588
	Doubtful	445	1,069	1,121	763	864	852
Percentage of Success....		88·1	94·1	95·1	95·8	94·7	93·6

Regarding the year 1857 the Superintendent states:—

"My absence from the Division for three-fourths of the year will not admit of my speaking personally to the working of vaccination in these districts during the period under review.

The following observations are offered simply in explanation of the Annual Return, and are educed from the office records of the year.

"It will be observed that the total number vaccinated during the year is twenty thousand five hundred and sixty-three (20,563), and that compared with the previous year there exists a deficit in the number of vaccinated amounting two thousand and fifty-one (2,051). This deficit may fairly be attributed to the dismissals that have taken place—no less than three of the former and one of the latter being recorded. The dismissals took effect on the 9th February, 10th June, and 8th August respectively, the resignation on the 1st August. The collective period of work of the three dismissed Vaccinators amounts to thirteen months and twenty-seven days, and the total number of vaccinations performed by these men, who were experienced in the department, is but eight hundred and fifty-one (851), thus giving the low monthly average of about 65 cases,—very far short of the average work of good men. The Vaccinator who was allowed to resign, had been ill from the beginning of the year, and no returns were received from him. The misconduct of the three men, leading as it did to their dismissal, the protracted illness of the fourth, subsequently followed by resignation, and inability at the time to supply their vacant places with efficient substitutes, are causes sufficiently obvious of the decrease which will be observed.

"The greatest number of vaccinations performed by any one Vaccinator during the year is two thousand four hundred and five (2,405), and the lowest nine hundred and fifty-one (951). The former number is returned by Vitto Bappoojee, of the Ahmednuggur Collectorate, a very attentive and energetic Vaccinator, and the latter by Anundrow Satiajee, of Khandeish, also a man well reported of, but who appears to have been incapacitated for some time by ophthalmia, which he is reported suffering from during the months of July and August. The district in which he was employed had been previously gone over, and on that account cases for vaccinations may not have been so readily obtainable; he is however one of those men who cannot get on without the assistance of a Peon, and this aid I regret to say has altogether been withdrawn in the Province of Khandeish, but continued, I am glad to report, in the Poona and Ahmednuggur Zillas.

"It would appear that male children are somewhat more readily obtainable for vaccination than females, ten thousand five hundred and forty-nine (10,549) of the former having been vaccinated, while the number of females returned is ten thousand and fourteen (10,014); but it is impossible to deduce any satisfactory conclusion on this head without a knowledge of the relative proportion of both sexes in the Division, a consideration which my office records does not supply. But a very small proportion of the total vaccination appear to have been effected during infancy, only three thousand six hundred and fifty-one (3,651) children are returned as vaccinated *under one year*, whilst the number *above one year* is sixteen thousand nine hundred and twelve (16,912). This strictly bears out what I observe in the districts, that parents are exceedingly unwillingly to submit any young children to the operation,—harmless and painless as it is shown to be; they can only be induced to do so after much persuasion, and perhaps more readily when threatened by Small-pox. Of the total vaccinated nineteen thousand five hundred and twelve (19,512,) or 94·7 per cent. are recorded as "successful," the number of "unsuccessful" and "doubtful cases" is one hundred and eighty-seven (187) and eight hundred and sixty-four (864,) or 90·0 and 4·20 per cent. respectively.

"The lymph is reported to have been everywhere good and abundant throughout the year, I can myself bear witness to its activity.

"The Returns of the occurrence of Small-pox are limited, showing that the disease has not visited the Division in any thing like its usual epidemic form—a result in every way satisfactory to vaccination, and one which I hope every succeeding year may more strongly confirm. No reports have been received of the practice of inoculation, which happily appears to have died out in this Division. Much apathy and indifference to vaccination undoubtedly still exists, but I am not aware of any other positive obstructions, and it may be hoped that as

Small-pox becomes less prevalent by the gradual introduction of vaccination,—and an effectual check to inoculation, which ought every where to be applied,—the Natives will learn in time fully to appreciate the blessings of the prophylactic.

"My predecessor appears to have visited and inspected the work of the Vaccinators employed in the Ahmednuggur and Poona Zillas. One Vaccinator has been convicted of sending in false Returns, and dismissed the Service. Before leaving the Department I had visited Khandeish, and inspected the work of two Vaccinators in that Province. Since my return I have been engaged in the Mawul, Huvelee, and Doonga Districts, inspecting the work and testing the Returns of two Vaccinators."

Southern Deccan Division.

Superintendents.—Assistant Surgeon Maitland, (temporarily Broughton and Johnstone,) and afterwards Mills.

Establishment.—Eighteen (18) Vaccinators, at a monthly cost of Rupees two hundred and thirty-two (232).

The following table shows the work of the five last years and average :—

Southern Deccan.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		2,741	23,205	16,208	16,262	15,532	14,789
Sex....	Males.....	1,618	13,762	9,123	8,656	8,090	8,249
	Females.....	1,123	9,443	7,085	7,606	7,442	6,540
Caste..	Hindoos	2,351	20,984	14,354	14,613	13,845	13,229
	Mussalmans ..	337	1,929	1,831	1,610	1,333	1,408
	Christians	53	114	19	39	56	56
	Parsees	..	..	4	..	..	1
	Other Castes..	..	178	..	..	298	95
Age....	Under one year.	..	..	..	..	3,991	..
	Above one year.	..	..	..	..	11,541	..
Result.	Successful....	2,540	21,348	14,724	15,005	14,809	13,685
	Unsuccessful..	143	473	439	640	446	428
	Doubtful	58	1,384	1,045	617	277	676
Percentage of Success		92·6	92·0	90·8	92·2	95·3	92·6

Dr. Johnstone reports as follows :—

"During the year 1856, the office of Superintendent of Vaccination in this Division has been held by Assistant Surgeons Maitland, Broughton, and Johnstone. The result for the year shows a slight increase in comparison with that of the previous year. The reduction of numbers in 1855 is I think accounted for by the circumstance of Dr. Maitland, in April 1855, feeling it necessary to require the Native Vaccinators to include in their Monthly Returns the 'Adnam' or family name of the parents of the children vaccinated, as the Police Establishment and others engaged in confirmation were constantly unable to find out the parties stated to have been operated on. The consequence of this careful act was the immediate and considerable reduction in amount of vaccinated in the Monthly Returns, and consequently the cause of the present decrease, when compared with the Return of 1854, and the equality of numbers in the years 1855 and 1856. This decrease, however, speaks in favour of the general truthfulness of present vaccination.

"In the work of a large establishment like that of the Southern Deccan Division, distributed over so considerable a tract of country, it may be supposed that the amount of superintendence

confined to one officer, cannot come up to its requirements, and it has consequently happened that advantage has been taken of this by some of the Vaccinators, and several cases have occurred of fabricated Returns.

"Though stating the small amount of superintendence able to be given, to be a cause of the evils of imperfect vaccination and false Returns, still there cannot be any doubt, that the lax manner in which the Regulations (paras. 26 and 27 of Section VIII.), have been hitherto administered, has likewise been a cause, as from the Vaccinators not obtaining assistance on occasions, and the indifference of the authorities (required to give this assistance), in performing the very moderate overlooking also required of them, the Vaccinator either temporarily thrown out of work, or careless from the carelessness of others, resorts to fraud to fill up the Returns which are expected from him.

"Were the Regulations of 1853,—which apparently combine all necessary points for the truthful performance of vaccination,—carefully attended to, and vaccination, as a Government work, placed more directly under the care and attention of the Civil Authorities in the districts wherein it is being performed,—that is—as a Government work, were an authoritative assistance rendered, it would tend to the more certain and more successful performance of vaccination.

"Small-pox has not visited the districts to any great extent, as far as the Reports of the Vaccinators are to be relied on, though at one time or another during the year it has made its appearance in all.

"Inoculation has not been reported to have interfered with vaccination, but during the rains it was carried on in the Jagheer of Bhore, in the Sattara Districts.

"In this Division fabricated Returns to a certain extent,—failure of systematic aid and intermediate overlooking (by Patells and Koolkurnies),—and the mode of keeping up the lymph, are the main causes of want of greater success. It is evident therefore that however zealous a Superintendent and his Vaccinators may be, they cannot carry out the work entrusted to them with success, amongst a people unwilling to come forward, even for their own good. The history of vaccination from its commencement shows the necessity of the people being urged, by the exercise of authority, to adopt its employment."

The Superintendent, Dr. Mills, reports of 1857 :—

"The total number vaccinated by the Government Establishment in 1857 exhibits a small decrease from that of 1856, being fifteen thousand five hundred and thirty-two (15,532,) against sixteen thousand two hundred and sixty-two (16,262), decrease seven hundred and thirty (730), but correcting the number of successful vaccinations in 1856 by deducting three hundred and twenty-nine (329) falsely reported, the number of successful operations in 1857 shows a slight increase, being fourteen thousand eight hundred and nine (14,809,) against fourteen thousand six hundred and seventy-six (14,676), increase one hundred and thirty-three (133).

"I think that the following causes might not unreasonably have been expected to occasion some decrease in the past year :—

"1*st*.—The generally excited and unsettled state of the country, which has been felt more or less throughout the Division, though happily not to any very great extent.

"2*nd*.—The frequent changes in the Superintending officers and the small amount of personal inspection, which has been practicable during the past year. In the beginning of February, Assistant Surgeon Johnstone gave over charge to Assistant Surgeon Maitland, who, holding the office of Acting Civil Surgeon of Sattara, was unable to continue the tour of inspection, and thus nearly four months of the fine season were lost. Assistant Surgeon Wiehe held the Acting Charge from 29th September to 21st October, when he was relieved by me.

"3*rd*.—The Establishment was much weakened by deaths and dismissals during 1857. Two of the best Vaccinators died in June and July. Three Assistant Vaccinators were dis-

missed at the end of 1856, and of course men unused to the work had to be entertained to fill these vacancies. Throughout the year the average strength has been only sixteen and three-quarters (16¾) instead of eighteen (18).

"The Returns show that of the total number vaccinated 52·1 per cent. were males, and 47·9 per cent. were females, giving a small increase in the proportion of females, as compared with 1856, when it was as 46·7 to 53·2. The numbers under one year of age are in the proportion of 26·4 per cent., while those in 1856 were 25·9 per cent., showing an increase in 1857 of 0·47 per cent. I have made a point of trying to persuade both village authorities, Vaccinators, and the people themselves, of the advantage of submitting children to vaccination at an early age, and I hope that every year will see their fears on this subject diminished. In the result of operations the year 1857 shows, as far as Returns and confirmation reports can be trusted, a decided improvement over 1856, the successful cases being 95·3 per cent. against 92·2 per cent. I have not attempted to show the proportion of vaccinations to population, as the data afforded by the census of 1851 would not at this time give any reliable result.

"The condition of the lymph and vesicles appears to be good throughout the Division. In only one case have I had any occasion to doubt its efficacy, and that was in the hands of a very inattentive operator. It was immediately replaced from a neighbouring Vaccinator. Small-pox has prevailed more or less at different times in all the Collectorates, and in the Talookas. It was epidemic in Hindee (Sholapoor) in January and February, but not very severe in character. In Bedee and Pursgurh (Belgaum) in February and March. The deaths amounted to 20 per cent. In Modebhal (Sholapoor), in April, twenty-seven (27) cases and seven (7) deaths were reported; in Hooblee (Dharwar), in September, there were two hundred and nine (209) cases, and fourteen (14) deaths; in Padshahpoor (Belgaum), in September, forty-two (42) cases and thirteen (13) deaths; and in Punderpoor (Sattara), in the same month, sixteen (16) cases and five (5) deaths. In several cases Small-pox has been reported by the local authorities in places where no Vaccinator was stationed, and immediate steps have been taken to vaccinate all the children requiring it, by sending the nearest operator to the locality as a temporary measure. In some cases the presence of Small-pox caused an immediate increase in the number of vaccinations; and I have no doubt, that were the Vaccinators and village authorities to use such occasions zealously, a considerable increase would, in every case, be the result. I have no reason to suppose that inoculation has at all obstructed the progress of vaccination. In one or two cases the prevalence of cholera has interfered.

"In consequence of the unsettled state of the country, the tour of inspection did not commence until the middle of November. It was my object to see those Vaccinators whose work had been longest unvisited, or had not been seen at all by my predecessors. Leaving Sattara, I proceeded to Koregaum, and thence to Khoondul, a town belonging to the Oundh Jagheer, thence to Tasgaum (Belgaum Collectorate), a very large and important town. In the surrounding villages I found vaccination very well received; but among the numerous Brahmin population of the town itself, there was much opposition; and where they had allowed their children to be vaccinated, they frequently refused to allow lymph to be taken from them, or to bring them for inspection. From Tasgaum I proceeded to Sanglee, Meeraj, Mharsal and Kagwar. None of these Jagheers had ever before been visited; and the Chiefs having objected to the Superintendent having any direct authority over the Vaccinators entertained by them, it seemed not unlikely that some jealousy of my presence might be shown. This, however, was by no means the case. I was every where received with marked attention,—with the chief of Meeraj I had more than one interview, and tried to interest both himself and those in authority under him in the success of vaccination: of promises on the subject all were most liberal, but I fear that its bearing on the happiness of their people is but little, if at all, appreciated by them. On my way from Kagwar into the Kolapoor state, I had an opportunity of conversing with two of the Koorundwar Chiefs. They were the first of the Belgaum

Jagheerdars to entertain a Vaccinator; but from the divided state of their Jagheer, not one of the four brothers took any particular interest on the subject, and but little progress was made. Now, however, the three younger brothers have determined to entertain another Vaccinator for their share of the Jagheer, and greater success may be hoped for. In the Kolapoor States I have visited the Vaccinators at Eechul Karinjee, Kagab, and Gurh Ingluz, and I have found that in most instances vaccination is well received, and proper assistance is given by the anthorities. The greatest opposition is offered by Lingaets, but to this rule there is a marked exception in the Gurh Ingluz Petah, where they are very numerous, and frequently fill the offices of Patells, Koolkurnies &c.,—and no where, that I have been, does vaccination make such steady progress. In addition to the above, I have also inspected the work in Chikoree Talooka (Belgaum), at Nepanee and the neighbourhood, Lunkeshwar, and Yenkunmardee, and the adjacent villages, and here little or no opposition is experienced Thus three (3) Government and seven (7) Jagheerdar Vaccinators have been visited by me up to the date of this Report.

"From this inspection I have reason to believe that the Returns are, on the whole, trustworthy; but that some cases are reported as successful, which the Vaccinators have been unable to see after operation, and for which they are content to take the parents' word, who, from unwillingness to submit children to revaccination, often say that it was successful, when it was not so. I have tried to impress on the Vaccinators that no case should now be reported as successful except those which they have themselves seen, and that a truthful report is much more important than an apparently large one. On the people I have urged the value of the operation itself, and the great advantage of submitting their children to it as early as possible, and I have tried to combat their prejudice against revaccination. I have every where invited the sick to come to me, and have administered such relief as was in my power, with the small means at my disposal, hoping that if the people are led to associate the idea of medical aid with vaccination, their confidence may be thus gained, and the spread of this invaluable prophylactic be promoted."

Western Guzerat.

Superintendent.—Assistant Surgeon R. G. Lord, M.D., afterwards R. Thorp, M.D.

Establishment.—Twenty-three (23) Vaccinators, at a monthly cost of Rupees two hundred and ninety-two (292); reduced in 1857 to fifteen (15) Vaccinators.

The following table exhibits the work of the last five years and average:—

Western Guzerat.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		28,129	38,295	45,156	36,567	28,857	35,401
Sex....	Males.....	16,344	20,855	24,263	19,373	15,270	19,221
	Females.....	11,785	17,440	20,893	17,194	13,587	16,180
Caste..	Hindoos	24,157	34,546	41,396	33,709	24,493	31,660
	Mussalmans ..	2,828	3,403	3,760	2,858	2,679	3,106
	Christians	..	..	..	..	..	..
	Parsees	..	..	..	..	..	..
	Other Castes..	1,144	346	..	..	1,685	635
Age....	Under one year.	..	..	..	..	15,143	..
	Above one year.	..	..	..	..	13,714	..
Result.	Successful....	21,354	29,848	38,524	32,131	25,871	29,546
	Unsuccessful..	2,802	2,477	1,915	1,421	871	1,897
	Doubtful	3,973	5,970	4,717	3,015	2,115	3,958
Percentage of Success		75·8	77·9	85·3	87·8	89·6	83·3

Western Division, Guzerat.

The Western Division of Guzerat* comprises the Government territory under the Collector of Ahmedabad, and the Native States under the Political Agents in Kattywar, the Mahee Kanta, and the Political Superintendent Palhunpore.

Situation and Extent.

It lies between the 20° and 25° of N. latitude, and 69° and 74° of E. longitude; the general direction from the northmost point of the Poseena Talooka in the Mahee Kanta to the southern promontory of the Kattywar peninsula (near Dieu) would be SS. Westerly, and the length of the Division measured thus would be about three hundred (300) miles. Its breadth varies much, taken from the east of the Mahee Kanta districts, due west to the extremity of those of Santulpore, under the Palhunpore Agency, the distance would be about one hundred and sixty (160) miles. Again from the mouth of the Saburmuttee river, or a point a little to the south of it on the coast, a line stretching to the extreme west of Kattywar, near Dwarka, would measure two hundred and ten (210) miles, but other parts are much more narrow, as for instance the isthmus between the mouth of the Saburmuttee river and Bajjana on the Runn, and the southern parts of Kattywar. In round numbers then, the Division may be said to be three hundred (300) miles in length, and one hundred and fifty (150) in breadth.

Boundaries.

Its boundaries may be stated to be, on the north the Rajpootana States of Marwar (or Jodhpore), Serohee, and Meywar; on the east the Dongurpore districts (under the Political Agent in Meywar), the Kaira Collectorate, Cambay territory, and Gulf of Cambay; on the south, the Indian ocean, where it washes the coast of Kattywar; and on the west, the Gulf and Runn of Cutch.

Districts excepted.

Within this area are considerable districts belonging to Baroda, the superintendence of vaccination in which has within the past year been made over to the Residency Surgeon there, who is to carry it on by Vaccinators paid by the Durbar. These districts contain the large towns of Puttun, Kurree, and Beesulnuggur, and considerable ones of Burnuggur, Keyralees, Sidhpoor, Meysanuer, Beejapoor and Kullole, with the surrounding villages and country lying to the west of the Saburmuttee, and Dehegaum, town and purgunna, to the eastward of that river; their population is very dense, and from the way in which their villages are

* For this interesting sketch of the districts in charge of the Superintendent of Vaccination Western Division of Guzerat, the Director General is indebted to Dr. Lord, who transmitted it under date 5th March 1857 to the late Medical Board.

in many places intermingled with those of the neighbouring districts, the withdrawal of the superintendence of vaccination in them from the officer in charge of that duty in this Division, can scarcely be considered advantageous, in a measure which, to be effectual, should be carried out as a whole. This admixture of districts obliges the Superintendent often to travel through and across this portion of country, so it is included in the area of the Division, estimating its extent roughly.

Area.

Exclusive of this, the districts under the Superintendent of Vaccination in this Division comprise an area of—the whole roughly computed—thirty-eight thousand (38,000) square miles, thus calculated—

	Square Miles.
1, Ahmedabad Collectorate	4,437
2, Kattywar States	20,000
3, Mahee Kanta	4,000
4, Palhunpore Districts	4,041
5, H. H. The Guicowar's territory (say)	3,500
Total square miles	37,978

Of the area or population of the latter districts, as not now belonging to the charge, no Return has been requested from the Resident at Baroda.

Population.

The population of the others from Returns received from the Civil and Political Officers in charge amounts to two million seven hundred and thirteen thousand six hundred and fifty (2,713,650) souls according to the last census, thus computed—

	No. of Souls.
(*a*) Ahmedabad Collectorate	561,557
(*b*) Kattywar	1,475,685
(*c*) Mahee Kanta	311,046
(*d*) Palhunpore	365,362
Total Population	2,713,650

But as some years have elapsed since the census was taken, and all who have been able to afford information on the subject agree in considering the population to have increased much since then, or to be perhaps underrated as in Kattywar, the truth is not exceeded in saying that three millions of inhabitants at present people the extensive districts in this Division.

Government Districts, Ahmedabad Collectorate.

(*a*) The Government districts in charge are all comprised in the Ahmedabad Collectorate, and are seven in number, viz. Dholka, Duskrohee, Ahmedabad, Veerumgaum,

Jeytulpore, Dhundooka, Purantej and Gogo,—their aggregate area is stated to be four thousand four hundred and thirty-seven (4,437) square miles, with a population, according to the last census taken in 1851, of five hundred and sixty-one thousand five hundred and fifty-seven (561,557) souls; but as about six years have elapsed since this census was taken, and during that time no very fatal disease or other cause of extraordinary mortality has prevailed to any great extent, it is not improbable that the above number falls considerably short of that of the actual population of these districts now.

Area and Population.

The proportion of the population to the area as stated, would be 126·5 inhabitants to the square mile, and the proportion of houses to people is nearly one to three. A calculation made from a Return of the inhabitants of one hundred and ninety-five thousand six hundred and sixty-four (195,664) houses in every part of the Collectorate gives an average of 2·8 individuals to each house, but this is probably a little below the actual rate at present. Assuming then three to be about the average to a house, the following estimate of population per square mile, computed from District Returns, will afford some idea of the size, or number of villages in the different Purgunnas:—

Proportion of Houses and Inhabitants to Area.

	Inhabitants.	Houses.	
1, Duskrohie, Ahmedabad (exclusive of Ahmedabad City)	285	95	To a square mile.
2, Duskrohie, Jeytulpore	267	89	
3, Purantej	152	50	
4, Dholka	130	43	
5, Gogo	127	42	
6, Veerumgaum	97	32	
7, Dhundooka	75	25	

Throughout these districts vaccination is unceasingly carried on by men in the employ of Government. In the natural year just closed (1856) eighteen thousand four hundred and one (18,401) persons were operated on, which would give a proportion of 3·2 per cent. to the whole population. Means have been lately taken for the more defined and equable distribution of the Vaccinators' labours, by which it is hoped their efficiency will be increased; but as this will form one of the subjects of the Divisional Annual Report, particulars are not now needed. The circumstance is mentioned here, as it is not improbable that the time lost in transferring Vaccinators to new stations, may have caused the

Proportion of Vaccination.

amount of their work to appear in a less favourable proportion to the extent of their charges, than might have been the case had there been no interference with their operations.

(*b*) The districts under the Political Agent in Kattywar form the largest portion of the charge of the Superintendent of Vaccination in Western Guzerat.

Kattywar.

Their area is estimated at not less than twenty thousand (20,000) square miles, and the population computed (for no correct census has ever been taken) at from nearly a million and a half to close in two million souls,—between these the truth probably lies. The latest attempt at a census was that of Lieut. Colonel LeGrand Jacob in 1842: the means at his disposal were confessedly imperfect, but making the best of them he states the population then to have amounted to one million four hundred and seventy-five thousand six hundred and eighty-five (1,475,685) souls, inhabiting three thousand seven hundred and ninety-four (3,794) towns and villages. Both Colonel Walker's and Mr. Blane's census exceeded this, and Colonel Lang considers it "somewhat low." For the want of more accurate information, however, we must content ourselves by estimating the population of the peninsula (exclusive of the Government districts on the eastern coast) in round numbers at a million and a half (1,500,000) of souls, which would give a proportion of seventy-five (75) to the square mile.

Area and Population.

Proportion of Population to Area.

The Establishment of Vaccinators in this extensive district at present is totally inadequate to meet the requirements of the inhabitants. The people seem willing enough to bring their children, and no difficulty in introducing vaccination among them is experienced. Only very few of the Chiefs keep Vaccinators, and no arrangement appears even to have been entered into by them to keep up an extended or properly organized system of vaccination throughout the country.

Vaccination.

The proportion therefore of persons vaccinated is deplorably small. In the past year (1856) twenty-one thousand two hundred and forty-five (21,245) individuals were vaccinated in this province, but of these eleven thousand six hundred and eighty-eight (11,688) (or more than half) were operated on by men of the Government Establishment detached here for the purpose of diffusing vaccination. The proportion of all vaccinations to the population per cent. would be 1·4, or of those traceable to the efforts of the Chiefs of the country only 0·6 to every hundred inhabitants.

Proportion of Persons Vaccinated.

(*c*) The districts under the control of the Political Agent in the Mahee Kanta constitute the NE. portion of this Division. The sub-divisions or Zillahs are six in number, covering an estimated area of four thousand (4,000) square miles.

Mahee Kanta.

The population in Major Whitelock's Report for 1853 was stated then to be three hundred and eleven thousand and forty-six (311,046) souls, which would give about seventy-seven (77) to the square mile.

Area and Population.

To meet the requirements of these districts, the Chiefs have entered to an arrangement for paying five Vaccinators, and a sixth will, it is hoped, soon be provided, as the Political Agent says some of the Chiefs have already agreed for their portion of the expense, and the remainder will probably ere long do likewise.

Vaccination.

The Returns for the past year show eight thousand seven hundred and ninety (8,790) persons to have been vaccinated in the Mahee Kanta, which would give a proportion of 2·8 per cent. to the whole population.

Proportion of Persons Vaccinated.

(*d*) Lying to the westward of the Daunta portion of the Mahee Kanta, and extending to the eastern border of the Runn of Cutch, are the districts in charge of the Political Superintendent at Palhunpore, which form the North-western portion of this Division.

Palhunpore Districts.

These are eleven (11) in number, under Mussalman, Rajpoot, and Koolee Chieftains.

Their greatest length is about one hundred miles, breadth the same, with an area of six thousand and forty-one (6,041) square miles, containing nine hundred and thirty-four (934) towns and villages. The population is about one-tenth ($\frac{1}{10}$th) Mussalman, the rest Hindoo; and according to the last census numbers three hundred and sixty-five thousand three hundred and sixty-two (365,362) souls, which would give only about sixty (60) inhabitants to the square mile. A considerable portion of the country to the northward is hilly, covered with jungle, and almost destitute of inhabitants.

Area and Population.

Proportion of Population to Area.

In these districts vaccination is carried on by five (5) men, paid from local resources, and succeeds well. To these the services of a Government Vaccinator in and about Deesa have lately been added, as from the large European population of that station, it appeared desirable that a fresh supply of good lymph should be always within easy reach of the hospitals there.

In the past year eleven thousand two hundred and thirty-six (11,236) inhabitants were vaccinated in these districts, which would give a proportion to the whole population of 3·0 per cent., an amount only exceeded in the Government districts of this Division.

Proportion of Persons Vaccinated.

For the other districts the figures would stand thus: total area fourteen thousand four hundred and seventy-eight (14,478) square miles; total population one million two hundred and thirty-seven thousand nine hundred and sixty-five (1,237,965) souls; average population per square mile eighty-five (85); total number vaccinated in 1856 thirty-eight thousand four hundred and twenty-seven (38,427) inhabitants; proportion per cent. of vaccination to population 3·0.

General Proportions of Population to Area, and Number of Persons Vaccinated in other Districts.

It may, with regard to the last item, be observed, that as vaccination has for a considerable time been carried on in most parts of these districts, the proportion has probably in many instances decreased, the labours of the Vaccinators being in such cases most likely confined to children who have been born since their last visit, and not extended, as was not unfrequently the case formerly, to several members in each family.

Cause of probable decrease of latter proportion.

Dr. Lord, in his Annual Report for 1856, says:—

"Before entering into numerical details showing the results of the labours of Vaccinators both of the Government and Native Chiefs' Establishments in this Division since the time of forwarding my last Report on the subject, I shall premise a few general remarks on matters which, from time to time, have claimed attention during the period under report.

"As such a course seems indicated by Medical Board's Circular No. 714 of 1856, dated 19th March, I shall first offer an outline of the tours made during this time in my official capacity.

"Towards the close of the year 1855 from the end of which this report commences, I had travelled through the Southern Districts of the Mahee Kanta, inspected the operations of the Native Chief's Vaccinator employed in the Bawisee Zilla, visited on duty the Political Agent at Sadra, and passed into the Purantej and Hursole countries in the Ahmedabad Collectorate, in both of which Vaccinators were employed. After passing through these, at the commencement of 1856, I moved to Morassa, the most northern point of the Ahmedabad districts for travelling; nearly westward from this, I inspected at Purdoose Dadalia the work of a second of the Mahee Kanta Vaccinators—these employed there from Surdooce. I was obliged to go a little southward as far as Roopaul, to clear a high range of hills. From this I marched to Ahmednuggur, where I inspected work formerly done by the Edur Raja's Vaccinators, after which I crossed Saburmuttee at Anglore, and moved my camp to near Beesulnuggur, a large town belonging to the Guickwar, in which a Government Vaccinator was at that time employed; from Beesulnuggur I travelled to Meysand, and when I had inspected the villages about there, I moved to the Kuttoosun Zilla, a detached district of the Mahee Kanta, adjoining the Veerumgaum Purgunna of Baroda; from Kuttoosun by Chundsuma to Puttun, at which town, and around, I inspected vaccination lately performed; from Puttun I travelled due west to Rhadunpore, Palhunpore districts, and on to Waurge and Suntulpore on the Runn; thence I worked northwards through the Rhankenjee, Morewarra, Tehuwarra, and Deodur districts, inspecting the work of all Vaccinators employed on that side of the western Burmas by Chiefs under the

Political Superintendent, Palhunpore; after which I crossed the Burmas river to Deesa and Palhunpore, at both of which places I inspected work; and then passing eastward re-entered the Mahee Kanta at the Daunta Talooka, passed through this, and across the high hills that separate it from Hurrun and Posseena, the extreme north of the Vaccinator's Division. From Delwarra I moved to Kotra on the confines of Meywar. From this I travelled south, keeping chiefly the direction of the Saburmuttee river, visiting Lamseea, Bhanpoor, Gandah, Manwarra, &c. to Oondenee, from whence I turned eastward to Edur, and again northwards, from that up the valley of the Huttemittee river, which I followed till close to the high hills, behind Paul and Pole; returning from thence I visited Moonditta, Mhow, and Bhelora, when, as it was the commencement of June, and some threatening of rain among the hills, I returned *viâ* Chundernee, Ahmednuggur Paruntej, and Sadra to Ahmedabad Cantonment."

"In the villages around this and the city of Ahmedabad, I was almost daily employed, during the next three months, and as soon as the waters had at all subsided, I marched, at the close of the third week in August, to Jeytulpore, around which place and beyond Lallee and the Kharree river to the bounds of the Kaira Collectorate I inspected vaccination then being carried on there, examined the Registers and children formerly operated on. I, however, could not travel far or fast, a great portion of the roads being under water, so after a short tour I returned to Ahmedabad.

"Towards the close of October I moved into the Duskrohee (Ahmedabad) and Sanund districts, and early in November I passed on through Sanund to the southern part of the Veerumgaum Purgunna. I then visited Veerungaum itself, travelled a couple of marches north of it, and then turned south, coming close along the border of the Nule *viâ* Sholapoor, Vikreea, Darnalli &c. to Gangur, in the Dholka districts; from thence I visited Dholka, and passing on by Kole and Huddulla, pitched near Dhundooka. Having inspected the work round there, I passed on to Dholera, and thence turned west by Akroo and Soondryanee to Raunpoor. Here I left the Government territories, entering the Kattywar Districts at Pullyad, and passing through them I inspected vaccination at Jhasdeen, Gowndul, Jaitpoor and Joonaghur, from which place I marched *viâ* Ratyana to join the Political Agent's Camp at Porebundur. Here the Rana keeps up a Vaccinator, with whom and the Assistant who accompanies me I worked while at that place, and afterwards at Amrapoor, where I marched with Colonel Lang, when I received orders to proceed to Rajcote and assume charge of the Civil duties there.

"This (for the present at all events) has interrupted my tour, which I proposed continuing round the south, and then through the eastern parts of Kattywar, including the Gogo Purgunna, and so working my way back again, should it have been necessary for me to return to Ahmedabad, at the close of the travelling season.

"In these tours I have visited and inspected the work (both recent, and some of that done in the preceding two years,) of fifteen (15) Government and thirteen (13) Native Chiefs' Vaccinators, and though there were occasional exceptions, the state of their lymph, correctness of Returns, as verified by personal inquiry, general character and demeanour of the men, and their zeal and industry in performing their work (often under considerable difficulties) appeared to me very satisfactory.

"I shall now, reviewing the correspondence of the past year, briefly notice the subjects therein adverted to, and which from time to time seemed to demand attention in conducting my duties.

"In January I received from Dr. Bow, in medical charge at Kherwarra, intimation of an outbreak of Small-pox among the Bheel villages along the Meywar frontiers. To endeavour to arrest its spread towards Guzerat, and afford, so far as the limited means at my disposal would permit, opportunities of vaccination to the inhabitants of the afflicted districts, I detached three Vaccinators in employ of the Mahee Kanta Chiefs to the boundary at different points, which arrangement, with matters of detail, I communicated to Sir Henry Lawrence, the Governor General's Agent in Rajpootana, for which I received that officer's thanks. A

copy of the correspondence having been forwarded through the Superintending Surgeon, I need not further advert to the subject here, than to say, I moved myself, as soon as other engagements would permit, with an Assistant Vaccinator towards the Meywar boundary, but the Small-pox had ceased, and I regret to say that among the Bheels we failed in obtaining any subjects for vaccination. While noticing this, I may add that a later attempt made by the Political Agent in the Mahee Kanta with the assistance of the Rao of Paul, who exerted himself much in the matter, has also been unsuccessful. The Bheels, as with me at Poleena, threatening to desert their villages and fly to the hills sooner than bring their children for vaccination. They are, however, a very simple-minded people, and could once their prejudice be got over, I have no doubt they would freely accept vaccination.

"In February, as the delay in the former month in collecting the Returns &c. required for completing the Annual Reports brought the matter strongly to my notice, I made an attempt, with the consent of the Superintending Surgeon, to introduce a few simple rules as to the framing and forwarding Monthly Returns &c., which I hoped would accelerate their reaching me; but owing, as it appeared to me, to my object not having been explained to the Political Agent, when forwarding from the Superintending Surgeon's office my request for the acknowledgment on the outside of documents of the date on which received for transmission by the Village Authorities, I have never been able to get this done, and the consequence often is vexatious delay and inability on my part to decide how caused.

"In March, having finished my tour through the Palhunpoor Districts, I submitted, through the Superintending Surgeon, a little sketch of the origin and progress of vaccination in that part of the Division, for which I was honored with the thanks of the Medical Board.*

"In April I received, through the Superintending Surgeon, copy of a letter from the Resident at Baroda, saying that the superintendence of vaccination in H. H. the Guicowar's districts was no portion of my duty, on which point I applied for instructions from the Medical Board.

"In May, and with reference to former correspondence, commenced a correspondence with the Political Agent in Kattywar, on the subject of the pay and control of Vaccinators in the employ of Native Chiefs in that Province, which led to a reference of the question to Government, whose decision has not yet been received.†

"In June I was favored with the Medical Board's instructions to withdraw all Government Vaccinators from His Highness the Guicowar's districts, which has accordingly been done.

"In July, as a consequence of the above, I proposed a small reduction of the Government Establishment of Vaccinators, which however the Medical Board decided against.

"In August I proposed that the surplus of those Vaccinators, above what I considered sufficient to meet the wants of the Government districts, might, in communication with the Political Agent, be employed in Native territory; but this proposition was also negatived by the Medical Board, who deemed it advisable that their operations should be confined to our own districts.

"In September, as from this increased number of men thus employed in the Ahmedabad Collectorate some complaints were made of Vaccinators encroaching on one another's work, I applied for the Collector's aid to divide the Collectorate into fifteen charges, one to be allotted to each Vaccinator. This task the Collector very kindly undertook, and has since accomplished, referring the lists to me, which I have in some instances slightly altered where local circumstances or natural boundaries, such as rivers, which might be obstacles in the rains, made it appear desirable. Lists have been filed in this office of the villages in each charge, and number of houses in each village. These lists are translated into Guzerathee, and a copy given to each Vaccinator of his particular charge. I may add that it was my intention to have required from each of these Vaccinators on the 1st April and 1st October a list of the villages he had visited in six months preceding, with their number of houses,

* Acknowledged also by the Director General and published at p. 18 *ante*.

† Since decided. See Kattywar Division, p. 32.

the number of times he had been to each, and number of children vaccinated, which would give a fair idea of his industry and the proportion of vaccination in his district.

"I may however observe, that so far as individual usefulness is concerned, and proportionate reduction of the expense of vaccination, these charges are scarcely extensive enough, so I am still of opinion that twelve (12) Vaccinators would be sufficient to meet their ordinary requirements, and the remaining three (3) might with more advantage be employed in the Central Districts of Kattywar, or elsewhere in Native States in this Division.

"In reporting the results of operations by men under the Superintendent of Vaccination in this Division, it has been usual to divide them into the Government and Native Chiefs' Establishments.*

"The Government Establishment of Vaccinators consists of twenty-three (23) individuals of different ranks, in which there are at present no vacancies. In the past year one Assistant Vaccinator was discharged at his own request, one Assistant and one Apprentice were discharged to make room for two Vaccinators who had been lent to the Guicowar, and two Assistant Vaccinators were dismissed for misconduct, the vacancies have been filled, and the Establishment is now at its full strength as sanctioned.

"The returns of work for this Establishment show thirty-six thousand five hundred and sixty-seven (36,567) persons to have been vaccinated by its means in the year 1856; this number exceeds the average of the last five years by over six thousand (6,000); but it is less than the amount of work done in the preceding twelve months by eight thousand five hundred and eighty-nine (8,589) operations.

"This I quite expected, and the causes of it may be satisfactorily explained as follows:—*1st*—The withdrawal of one Vaccinator (a fourth of the whole Establishment) from the Guicowar's populous districts when their work was abundant; *2nd*—Time lost in transferring men to new charges, and the loss of the services of two men for about four months by their not joining; *3rd*—The crowding of Vaccinators in Government districts when vaccination has been extensively practised; and *4th*—As a consequence of the latter circumstance, a decrease in the number of subjects for vaccination."

Regarding the year 1857 Dr. Lord reports as follows:—

"In my last Annual Report on Vaccination in the Western Division, Guzerat, I brought the history of transactions down to the 31st March 1857, as I had then entered on a new charge, and expected soon to be relieved of the vaccinating duties; but the exigencies of the Service caused this to be postponed till near the close of the year, before which time an important change, greatly reducing the extent of the Division and number of operators in it, had taken place.

"This was the transfer to the Civil Surgeon in Kattywar of the superintendence of vaccinations in all districts, under control of that Political Agency, comprising an estimated area of twenty thousand (20,000) square miles, with about a million and a half (1,500,000) of inhabitants.

"The Western Division thus reduced in size now comprises—

	Square Miles.	Population.
Government districts under Ahmedabad Collector, including Gogo Purgunna	4,437	561,557
Mahee Kanta	4,000	311,046
Palhunpore, &c.	6,041	365,362
Total....	14,478	1,237,965

"The Government Establishment of Vaccinators is also reduced from twenty-three (23) to fifteen (15)—all (with the exception of an Assistant at Deesa) employed in the Government districts. The Mahee Kanta and the Palhunpore villages are visited by men kept up by the

* A description of the Native Chiefs' Establishment will be found under its proper head hereafter.

Native Chiefs under these Agencies—five (5) Vaccinators in each. The Sirdar Puttawatas of the Edur Raja have agreed to keep up a sixth man in the Mahee Kanta, and by and bye the Palhunpore Dewan may be induced to keep up an additional Vaccinator for his extensive district, which is insufficiently provided for; but people's minds were otherwise so much engaged during the past year, that it would probably have seemed ill-timed to have urged any matter of the kind.

"The present Establishment therefore under the Superintendent in Western Guzerat consists of twenty-five (25) subordinates, viz. fifteen (15) Government, and ten (10) Native Chiefs' Vaccinators.

"I regret that I am unable to state in figures the comparative results of the labours of Vaccinators in the Western Division for 1856 and 1857, in consequence of the records of the office having been removed from my charge before the close of the latter year. This information will, however, doubtless be supplied in his Annual Returns by the present Superintendent. It is almost needless to observe, that with the transfer of yearly one-third of the Government Establishment, and withdrawal from the totals of the sum of the work of all the Native Chiefs' Vaccinators in Kattywar, there must be a considerable falling off; what this may amount to might be approximately estimated from a simple comparative statement of the total of vaccinations by the Government and Native Chiefs' Establishments, as they stood in the records of the Western Division, Guzerat, for the first and second six months of 1856 and 1857. The diminution in the last would show about the amount lost in so much time; but this Return I have been unable to procure correct, probably from having failed to explain exactly what I want; the information, however, if deemed of any moment, can be easily obtained from the office where the records now are. I may add that the work of the Kattywar Vaccinators was accounted for separately from the 1st July 1857, which explains why the decrease in the last half year would afford an estimate of diminution thus caused in the Returns from the Western Division, Guzerat. The total vaccinated in Kattywar in that time would not do so fairly, as considerable changes, affecting the work of the Vaccinators there, had to be carried into effect.

"The lymph, when I left the Division, was generally in good condition, and continued to be reported so until I delivered over charge of the office.

"Small-pox has been generally prevalent throughout the country this season, but no special reports of its occurrence (beyond a casual mention of its having appeared at Deesa, in an application for lymph from that station) were made during the time I was in charge of the Guzerat districts. I am not aware that inoculation is in them practised; nor, except the prejudices of the people, and want of confidence in the operation, do I know of any obstacles to the spread of vaccination in Guzerat. I should trust that the silly idea that Government intended charging or taxing the parents for it, which once was entertained in the direction of Rhandapore and countries bordering on the Runn, has long ago ceased to exist.

"Beyond engaging the interest of Native Chiefs in support of vaccination, and encouraging any desire on their part for the entertainment of extra Vaccinators, for whom there is ample room in the districts under both the Mahee Kanta and Palhunpore Political Agencies, and which can be best done through the officers in charge of these, when fitting opportunities present, it does not strike me that much is required in furtherance of this object in the Western Division, Guzerat. The practice is, I hope, gaining ground and favour, slowly it is true, and with much to struggle against, but still gaining. If in the present year, as in other provinces, Small-pox prevails more or less in Guzerat, and the benefits of good vaccination have an opportunity of becoming appreciated, an important step would be gained towards making it popular. Ignorance of our intentions, and distrust of the real benefit of what we offer, are amongst the chief obstacles to our progress, and any thing tending to remove these must operate powerfully in favor of the undertaking.

"A new charge, or rather division of the old one, has been apportioned me, and in trying to promote vaccination in this during the past year, and attending as Civil Surgeon to other

local calls of duty, my presence has been constantly required in Kattywar, allowing no time to be devoted to a tour in the Guzerat districts, or personal inspection of vaccination in them; the remaining duty was however conducted, as far as was in my power, by correspondence till near the close of the year, when a successor was appointed to be Superintendent of the Division, for whom, in obedience to orders to that effect, I despatched the office on the 15th December to the care of the Superintending Surgeon at Ahmedabad.

Eastern Guzerat.

Superintendent.—Assistant Surgeon W. Peach, M.D., afterwards C. G.H. Ross.

Establishment.—Seventeen (17) Vaccinators, at a monthly cost of Rupees two hundred and twenty (220).

The following is a comparative table of the last five years and average :—

Eastern Guzerat.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		16,052	19,889	23,277	26,260	25,563	22,208
Sex....	Males.....	9,293	11,713	13,252	14,772	14,586	12,723
	Females.....	6,759	8,176	10,025	11,488	10,977	9,485
Caste..	Hindoos.....	14,130	16,610	20,865	23,663	20,978	19,249
	Mussalmans ..	1,902	2,644	2,308	2,552	3,272	2,535
	Christians	..	8	5	..	..	3
	Parsees	20	3	99	45	28	39
	Other Castes..	..	624	..	..	1,285	382
Age....	Under one year.	..	..	..	..	4,759	..
	Above one year.	..	..	..	..	20,804	..
Result.	Successful....	13,073	16,941	20,427	22,854	22,322	19,123
	Unsuccessful..	2,195	1,768	1,311	1,902	1,444	1,724
	Doubtful.....	784	1,180	1,539	1,504	1,797	1,361
Percentage of Success		81·4	85·1	87·7	87·0	87·3	85·7

The Medical officer in temporary charge of the duties states :—

"The Returns of Vaccination in the Eastern Division of Guzerat for the year 1856 exhibit a numerical improvement on former years, and the goodness of the work may be assured from the pains taken generally, no less than active personal supervision exercised over the Establishment by the Superintendent Dr. Peach who has lately left. The 'Good and Bad Conduct Record' for the year is favourable on the whole; the dismissals have been few, and the fines, for minor derelictions, not numerous.

"The zeal of the Superintendent has no doubt been a principal means of improving vaccination in this Division, but other causes have probably contributed to the end, such as diminished prejudice of the people, improved help derived from the Civil functionaries, &c. &c. The extent of such helping influences however (presuming them to have existed), together with other matters, generally made subjects of Annual Report, can only be related by one under whose eye they have taken place. Holding charge for a short time only I am not in this position, and simply submit therefore the statistical amount of work."

The Superintendent, Mr. Ross, reports as follows for 1857 :—

"The Eastern Division Guzerat has not been unaffected by the troubles which have taken place in India during the past year.

"The districts, with one or two exceptions, have not been visited by the Superintendents of Vaccination,—and this may be looked upon as the chief cause in the decrease of the year, inasmuch as it induces idleness and carelessness on the part of the Vaccinators.

"The Native officials do not render hearty assistance in the work: complaints under this head come in almost monthly, more specially from the Broach and Surat Collectorates. With reference to the Vaccinators themselves I can say but little from personal experience: those that I have seen are well acquainted with their work; but as before alluded to, carelessness attaches to the Returns of three or four of them. A marked difference occurs in the comparative numbers vaccinated by each, which is due in a great measure to the populousness of their respective spheres of labour. In the Oolpar and Koorsud districts, the Vaccinators have to contend with the prejudices of an unwilling people, which, from my own knowledge of the fact, must interfere with larger and more satisfactory numerical results. This conclusion is reached on contrasting the work of two Vaccinators, one of whom furnishes a total of two thousand nine hundred and seventy-eight (2,978) operations, the other a total only of nine hundred and forty-one (941), or a difference of two thousand and thirty-seven (2,037). No changes have taken place in the Vaccination Establishment during the year.

"The reports touching the quality of the lymph have been favourable. The virus in the cases coming under personal observation, producing the characteristic vesicle. Small-pox, fatal in most cases, occurred sporadically in one or two of the villages I visited. On inquiry, I found that in one of these the children had been vaccinated with doubtful or rather unsuccessful result: the disease was confluent. Inoculation seems to have died out in the Eastern Division Guzerat, at least I have not met with any cases, nor have any been reported. The percentage of successful vaccination may be fixed at eighty-seven. The main obstacle to the spread of vaccination lies in the ignorance and prejudices of the people. The personal presence, however, of the Superintendent, is the best argument in dealing with these; for the villagers brought their children readily when they learned that a European had come amongst them, who formerly held back when the Vaccinator appeared. Had not the exigencies of the Service recalled me from the districts, I should have been able to furnish a more satisfactory report than the one now submitted. I trust, however, and believe that the circumstances which render it brief of necessity, do not affect the statistical correctness thereof.

Sind Division.

Superintendent.—Assistant Surgeon T. E. P. Martin.

Establishment.—Fifteen (15) Vaccinators, at a monthly cost of Rupees one hundred and ninety-six (196).

Table of five years operations and average :—

Sind Division.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		6,617	23,457	20,809	15,551	40,777	21,442
Sex....	Males.....	4,271	14,845	12,175	9,265	25,577	13,226
	Females.....	2,346	8,612	8,634	6,286	15,200	8,216
Caste..	Hindoos	1,416	5,415	7,068	3,678	7,895	5,094
	Mussalmans ..	5,115	18,008	13,703	11,830	32,751	16,281
	Christians	77	33	37	29	17	39
	Parsees	9	1	..	14	7	6
	Other Castes..	..	..	1	..	107	22
Age....	Under one year.	..	..	..	..	12,863	..
	Above one year.	..	..	..	..	27,914	..
Result.	Successful....	5,829	21,765	19,067	14,226	39,642	20,106
	Unsuccessful..	372	483	317	325	421	383
	Doubtful	416	1,209	1,425	1,000	714	953
Percentage of Success....		88·0	92·7	91·6	91·4	97·2	92·2

Owing to the change in the office of Superintendent, there was no Report forwarded for the year 1856.

Mr. Martin, in his Report for 1857, states as follows:—

"In 1856 fifteen thousand five hundred and fifty-one (15,551) children were vaccinated, and during the past year the number of operations was forty thousand seven hundred and seventy-seven, (40,777), showing an increase in the past over the previous year of twenty-five thousand two hundred and twenty-six (25,226). This increase is to be attributed in a great degree to the fact that Vaccinators are now, by the liberality of Government in giving them batta, enabled to provide means for moving about the country. Prior to this measure being brought into operation, it would appear, so far as my examination has extended, that Vaccinators confined their operations to very limited circles. In the district of Mahomed Khan's Tanda for example vaccination had been carried out with tolerable completeness in one Kardarate (Mathlee) and in a small portion of the Moockteyarkarate, but five-sixths of a district, the area of which is four thousand (4,009) square miles, has been not at all, or very partially, worked over. I could not learn that a Vaccinator had ever been seen in large sections of this district, and I have examined nearly every Tuppah of five out of the six Kardarates into which it is subdivided. All the other districts in Sind are in nearly the same condition as regards vaccination. The circumstance of so much new ground being opened up for the first time, will also help to explain the large numbers operated upon during the past year as compared with 1856.

"It would appear that there is a marked difference in the work of individuals, which must ever be the case whilst they are so widely separated. Under the eye of the Superintendent nothing can exceed the diligence and zeal manifested, but when immediate superintendence is removed, this zealous spirit is not kept up. The natural aptitude of individuals also varies considerably, and sensibly affects their Returns, and the character of a district as to the population being thinly scattered, or the contrary—the villages being near to one another or separated by considerable distances—influences the number vaccinated.

"Of the numbers vaccinated twenty-five thousand seven hundred and seventy-seven (25,777) were males, fifteen thousand and two-hundred (15,200) females; twelve thousand eight hundred and sixty-three (12,863) were under one year, and twenty-seven thousand nine hundred and fourteen (27,914) above one year. Of the total number vaccinated forty thousand seven hundred and seventy-seven (40,777), there were thirty-nine thousand six hundred and forty-two (39,642) successful cases, or 97·2 per cent. This Return shows an improvement also in the percentage of success, as compared with the previous year, when of the total number vaccinated fifteen thousand five hundred and fifty-one (15,551) there were thirteen thousand six hundred and seventy (13,670) successful cases, or 87·9 per cent. The favourable percentage of the past year is to be attributed to the constant use of fresh lymph from the vesicle.

"The lymph has been kept in good condition during the whole year, and continues excellent.

"Small-pox has been prevalent in the Mahomed Khan's Tanda and Shabunder districts during the past year. No reports have been received as to the number of cases and deaths. Comparing the result among those previously vaccinated and the cases unprotected by vaccination, such Returns would be interesting and useful; but the difficulty of getting them seems just as great now as when referred to by Dr. Bayne in his Report for 1855. Inoculation is still practised in some parts of Sind, but it is not general. It was found among the Belooches in the hill districts and in the Kardarate of Meerpore Sakra, neither of which had been visited before,—as far as I could judge the people did not appear to be wedded to the practice, for they gave up their children to be vaccinated very readily.

"For the more effectual spread of vaccination in Sind, the experience of the year would lead to the opinion, that great diligence on the part of Vaccinators, with the exercise of prudence

and tact, and the hearty co-operation of the Civil Executive Officers, Kardars, Tuppudars, &c. is nearly all that is required on the part of the people; no serious or general obstruction has been met with except in the district of Jacobabad, and in this district some little way has been made during the past year.

"The past year being my first year of office as Superintendent of Vaccination, my attention was at first directed to inquiring into the general feeling of the people as to vaccination, and the extent to which vaccination had been carried out. As to the feeling of the people, the result of inquiry is on the whole favourable; even where the operation was introduced for the first time, very little difficulty had to be encountered. The real difficulty in Sind is the enormous size of the Province to be worked over by fifteen Vaccinators. The plan of keeping one Vaccinator in each district has certainly failed; inspection cannot be sufficiently frequent, and without it very little good is effected. I have adopted the plan of concentrating the Establishment, so that several individuals are inspected during each month, and all are under the influence of the Superintendent. I am happy to be able to say that no complaints of the conduct of Vaccinators has ever been made to me."

Kattywar Division.

Superintendent.—Assistant Surgeon R. G. Lord, M.D.

Establishment.—Eight (8) Vaccinators, at a monthly cost of Rupees ninety-eight (98).

Kattywar Division. 1857.

Total Number Vaccinated		2,573
Sex	Males	1,402
	Females	1,171
Caste	Hindoos	2,025
	Mussalmans	492
	Christians	..
	Parsees	..
	Other Castes	56
Age	Under one year	778
	Above one year	1,795
Result	Successful	2,150
	Unsuccessful	203
	Doubtful	220
Percentage of Success		83·5

The Superintendent writes :—

"At the commencement of the year 1857 vaccination in the districts under control of the Political Agent in Kattywar formed the larger portion of the charge of the Superintendent of Vaccination in the Western Division of Guzerat; but the extent of the country seemed to demand a greater amount of attention than its remoteness from Ahmedabad, and claims elsewhere on his time rendered it altogether in the Divisional Superintendent's power to bestow. The inhabitants too are a peculiar people, very circumscribed in their ideas of distance &c., and viewing with distrust, and as foreign to the their own province, an Establishment, the head of which generally resided beyond its limits. The rules which elsewhere obtained, did not appear to the Political Authorities in Kattywar likely to find favor, or advance the cause of vaccination, in their districts; and the result, as shown by the small returns of operations for so extensive and populous a country, was far from satisfactory. The Political agent therefore advocated the introduction, or revival, of a local system of vaccination in the province, under the superintendence of the Civil Surgeon, aided by the influence of the Agency; and Government, in a Resolution dated 28th March 1857, was pleased to approve of such an arrangement being carried into effect, to which the sanction of the Supreme Government was subsequently obtained,—its operations being at first limited to a probationary period of one

year. On the 1st July operations were commenced, and separate Returns &c. have been kept. The aggregate results of the six months are now, at the close of the official year, submitted. Between the time of the receipt of the Resolution of Government in March, and its sanction by the Govenment of India, I had endeavoured, during a visit to the Political Agent's camp in May and June, through his influence, favourably to dispose to the measure the Karbaries (or Agents) from the most influential Chiefs in the province then collected there; and by a Committee elected from amongst themselves, was drawn up a Government document, setting forth the terms on which they thought Vaccinators on the Native Chiefs' Establishment should be entertained &c. In this perhaps some slight modifications might be deemed desirable, (which may hereafter be obtained,) but as the expressed wishes of Government were 'that the Chiefs should be left as much as practicable to select their own Vaccinators,' and 'make their own arrangements,' it seemed evidently the best course to acquiesce at once in the terms proposed by their Agents, (which in general appeared satisfactory, and likely to aid in accomplishing the object desired,) and so endeavour to secure, as far as possible, the good will of these towards the furtherance of the undertaking.

"Subsequent to the receipt of the sanction of the Supreme Government, I applied through the Superintending Surgeon to the Medical Board for a separate Establishment of Government Vaccinators, to be detached from the North-western Division of Guzerat, for duty in the Kattywar Circle, which, after some correspondence, was arranged and notified in Government Orders of the 13th October last. These men, counting eight (8) district Vaccinators, with sixteen (16) more in employ of Native Chiefs, constituted the establishment in Kattywar at the close of the past year. Many of them are hardly yet settled in their districts, and Returns from some extend but to a few weeks or months, while from others no reports of operations have yet been received. In some localities people are indifferent or averse to the operation; in others their wants have yet to be met by the entertainment and education of Vaccinators. The whole scheme is still in its infancy; much care has been expended in bringing it so far. It remains to be seen whether it will work well, and grow into a healthy and useful institution, or (when the impetus which it has at present received has ceased to influence it) dwindle down to its former meagre proportions—either event may be looked on as quite within the range of probability; the result of the effort will, however, be doubtless much affected in the first instance by the interest manifested in it by succeeding Political Agents; and secondly, and with more permanent effect, should opportunities offer, by proof of the value of the prophylactic, particularly if experienced among the families of the more wealthy and influential inhabitants.

"As this Establishment is of such recent origin, I cannot offer the comparative results of labours of individual members. Before despatching the records of vaccination in the Western Division of Guzerat, I extracted therefrom the following statement of the number of Vaccinators and aggregate results, half-yearly, of their labours in Kattywar, which will show what advance has been made in the increase of means, for the more general diffusion of vaccination in this province.

Half-yearly Statement of Vaccination Establishment and Operations in Kattywar for the last two years.

1856	No. of Vaccinators. Government.	Native Chiefs.	Total.	No. Vaccinated.
1st Half-year.....	6	8	14	10,214
2nd Half-year	6	8	14	11,031
			Annual Total.....	21,245
Of the above by Government Establishment				11,688
„ „ by Native Chiefs' do.				9,557

1857	No. of Vaccinators. Government.	Native Chiefs.	Total.	No. Vaccinated.
1st Half-year	7	9	16	10,975
2nd Half-year	8	16	24	8,411
			Annual Total.....	19,386

Of these by Government Establishment	8,794
,, by Native Chiefs' do.	10,592

"From the above it will be seen that the Native Chiefs' Establishment at the close of the year 1857 was double the strength it appeared twelve months before. Another Vaccinator has since been added to it, and I hope to be enabled by degrees, as opportunities present of obtaining the aid of Chiefs who have not yet entertained Vaccinators, still further to augment its numbers. As regards operations it will be observed that under the old regime no ground was lost up to the 1st July; since then, a nearly new Establishment had to be formed. Government Vaccinators had to be sent, some to Guzerat, some called from thence: of those who remained in Kattywar the stations have been changed, the Chiefs of the larger towns having generally provided their own Vaccinators, while the Government men they liberated, were sent to do duty in the smaller and more impoverished Talookas—in these the number of petty and conflicting interests renders it often extremely difficult to procure any thing like general assistance from the Vaccinators in carrying out his work, particularly in conveying children with infection from one little township to another, and I suspect, that henceforth, from the nature of their charges, the amount of work done by Government Vaccinators in this province will not come up to what they formerly accomplished, when located in large and populous towns and districts.

"The present Returns cannot be supposed to convey a fair idea of the average amount of work to be half-yearly expected. It will be observed that though the work in the first half of the year exceeded that in the corresponding six months of 1856, there has beeen a falling off of nearly three thousand (3,000) in the annual total by the Government Establishment, which is to be attributed chiefly to the time lost in changes of charges, reliefs, &c., and in some degree to the other circumstances above noticed.

"The number of operations by the Native Chiefs' Vaccinators, though an advance on former years, is also far short of what we may hereafter expect: many of these men had to live in my house for months, and be trained to their work; and though the Establishment may I hope be considered to count a fair number of hands at the close of the year, a glance at the Returns will show that the work of many is yet to be accounted for. Let it be borne in mind that a Vaccinator cannot be trained in a day or in a month or two, and also that by the terms of the Committee's arrangement, we have yet advanced very little into the period from which operations were proposed to commence, and it does not seem unreasonable to ask, that the results already obtained, may not be deemed conclusive.

"The lymph is in general good, and the vesicles are well filled whenever any of the characteristic qualities have been observed by me wanting, its further use has been interdicted, and a fresh supply procured.

"Small-pox has not been reported to have any where prevailed in these districts, and I am not aware that inoculation is now practised in this province, nor, excepting the prejudices or apathy of the inhabitants, do I know of any existing obstacles to the spread of vaccination.

"My tour was not entered on till some time after the commencement of November, as circumstances interfered with my being relieved of station duties at Rajkote. I first visited Gondul, where a man selected, and sent to me for education by the Durbar, had been sent in September, and I found him carrying on operations satisfactorily. From Gondul I went to Jaitpoor, from whence a Government Vaccinator, who had worked well and with much credit in that district, had been recalled to Guzerat. In his stead, the Durbar agreed to take into

service a Vaccinator who had been displaced by the Gondul people employing a man of their own. From Jaitpoor we passed on to Dhorajee, a wealthy and populous town, where the people promise to keep up a Vaccinator, but have not yet completed arrangements for doing so. From Dhorajee we went to Buntlee and Joonaghur, under which Durbar three Vaccinators are employed, but they do not appear to get on very well with the people, so I have not discouraged an attempt on the part of the Karbarees to employ men from their own country, which, however, they have not yet accomplished. From Joonaghur Buntlée we went to Mangrole, a considerable town on the sea coast with a small Talooka attached, the Chief of which however has hardly sufficient means to keep up a Vaccinator exclusively for his own villages. From Mangrole we marched by Nuveebunder to Porebunder, where the Rana wished a man of his own, whom I had trained, to be exchanged for a Guzerat man who had been for some years with him. This was arranged before leaving Porebunder, and at the close of the year we had marched by Rawul and Rumbalia and reached Noanuggur two days before the date to which this Report extends. In this tour and to the present time I have accompanied Colonel Lang's Camp, and to his influence and exertions must be attributed the degree of support which the Chiefs at present seem disposed to extend to vaccination. As his plans will probably ere long take him in another direction, I then intend by myself to make a tour of inspection among the Vaccinators already established, and hope by the close of the travelling season to have visited most of those in the Northern and Eastern Districts, and so make altogether a tolerably extensive circuit throughout my charge.

VACCINATION UNDER CIVIL SURGEONS AND OTHERS.

23. In the Appendix there are two tables, numbered 2, following each other,—one for the year 1856, the other for 1857. In both tables the names of thirty-five stations are mentioned, although at twenty only are Native Vaccinators under Civil Surgeons specially entertained. The term "fixed establishment" in contradistinction to the "moveable establishments" of Superintendents of Vaccination is applicable to those stations at which a Native Vaccinator is employed.

24. In 1856 the total vaccinated was thirty-five thousand seven-hundred and thirty-one (35,731), which, compared with 1855, shows a diminution of two thousand five hundred and seventy-four (2,574). In 1857 the total number was twenty-eight thousand two hundred and thirty-eight (28,238), a decrease of seven thousand four hundred and ninety-three (7,493) from 1856. The stations most remarkable for diminished numbers are, in 1856,—Sattara, Bhooj, Rajcote, Dhoolia, Ahmedabad and Kurrachee; in 1857,—Bhooj, Hydrabad, Rajcote and Aden. The several causes giving rise to the decrease will be found under the Reports of each Station. In 1856 the number of persons vaccinated by each Vaccinator is computed at one thousand four hundred and fourteen (1,414), which, with reference to the charge to Government for every hundred (100) persons vaccinated, averages about Rupees nine, annas fourteen, and pies ten (9-14-10). In 1857 each Vaccinator is supposed to have

operated on one thousand three hundred and thirty-eight (1,338) individuals only, and hence the average payment is raised to Rupees ten, annas twelve, and pie one (10-12-1) per hundred. The rate per cent. of successful cases to total number vaccinated was in 1856 91·0, and in 1857 89·0. In 1856 there were twenty thousand six hundred and eighty-eight (20,688) males and fifteen thousand and forty-three (15,043) females vaccinated, in the proportion of about five (5) of the former to three and a half (3½) of the latter sex. In 1857 the number of males was sixteen thousand and eleven (16,011), and of females twelve thousand two hundred and twenty-seven (12,227), in the proportion of four (4) of the former to three (3) of the latter sex. With respect to "caste," Hindoos in both years predominated. In 1856 about 60 per cent. of the total number, and in 1857 about 70 per cent. In 1857 there were about seven thousand (7000) more vaccinations performed *above*, than *under*, one year of age.

25. The several stations in the Appendix are arranged according to Superintending Surgeons' Divisions, and in that order they will be now examined.

Under the Superintending Surgeon Presidency Division and Indian Navy.

Tanna.—Assistant Surgeon A. V. Ward.—One (1) Vaccinator on Rupees nine (9) per mensem.

Table of Vaccination for five years and average :—

Tanna.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		57	191	278	390	254	234
Sex	Males.....	29	127	150	203	137	129
	Females.....	28	64	128	187	117	105
Caste..	Hindoos.....	30	147	198	228	177	156
	Mussalmans ..	4	7	51	53	29	29
	Christians....	7	17	18	95	30	33
	Parsees	15	17	11	7	8	12
	Other Castes..	1	3	..	7	10	4
Age	Under one year.	..	..	..	..	60	..
	Above one year.	..	..	..	..	194	..
Result.	Successful	30	120	206	370	240	193
	Unsuccessful..	6	39	60	18	14	27
	Doubtful	21	32	12	2	..	14
Percentage of Success....		25·6	62·8	74·1	94·8	94·8	75·8

1856.—The Civil Surgeon (Mr. Ward) writes:—

"It is gratifying to observe that the efforts made to spread the benefits of vaccination in the town of Tanna during the year 1856 have been attended with some slight success. Three

hundred and ninety (390) persons have been vaccinated, of whom a very large proportion, three hundred and seventy (370) or 94·8 per cent. have been successful cases. This is an increase of one hundred and twelve (112) over the preceding twelve (12) months. Still it must be admitted that among a population of about twelve thousand (12,000) souls, the number is lamentably small, and far short of what might be accomplished could the prejudices against vaccination so persistently displayed by the bulk of the inhabitants be lessened or overcome. It may be remarked, however, that a year seldom passes over Tanna without a visitation of Small-pox,—the consequence is that very few children of more than a year old are to be found who are not protected either by vaccination, inoculation, or Small-pox. The past year was no exception to the rule, for the epidemic prevailed during the first three (3) months of the year, and it was during that time when a degree of fear pervaded the minds of parents making them more inclined to listen to reason and persuasion, that the majority of the children were vaccinated. The cost to Government for every hundred (100) persons vaccinated during 1856 has been Rupees twenty-seven, eleven annas, and one pie (27-11-1), or four (4) annas and five (5) pies per head; whilst in 1855 it was Rupees thirty-eight, annas thirteen, and pies six (38-13-6) per hundred (100), or six (6) annas and five (5) pies per head.

"Among the Parses, Native Christians, and Mussulmans, but little opposition has been met with. It is among the Hindoos (particularly the Banians and Coolee castes), who form the bulk of the population, that the great difficulty has been met with. The strong prejudice against the introduction of vaccination into their families, which exist among these castes, seems to rest mainly upon being an innovation upon their time-honoured customs. As yet I have completely failed in overcoming it. It is to be hoped, however, that time and perseverance in persuasive efforts may yet lead them to appreciate the benefits of a prophylactic which Government have so liberally provided them, but which they have hitherto so completely ignored. I can only say that on my part no trouble shall be spared to bring about this desirable result.

"The large proportion of successful cases is good evidence of the purity and genuineness of the lymph which has been in use. In October, however, I observed that the vesicles were small, and that they maturated at too early a period. No time was therefore lost in procuring a fresh supply from Bombay, and since that time no aberration from the normal progress of the disease has been observed. The Assistant Vaccinator has been fairly zealous in his vocation, and his conduct generally has been such as to merit commendation."

1857.—The total number vaccinated was only two hundred and fifty-four (254), a diminution of one hundred and thirty-six (136) from the previous year, owing probably to the dismissal of the Vaccinator. The average cost of every hundred (100) persons vaccinated was Rupees forty-two, eight annas, and three pies (42-8-3). Vide para. 47, p. 14, Vaccination Report 1855. Of the new Assistant the Civil Surgeon writes:—

"The Vaccinator has been zealous in the performance of his duty, though not successful in overcoming the prejudices of the Native population of the town against the introduction of vaccination."

Alibaugh.—Mr. Senior Apothecary Hearn.

Table of Vaccination for five years and average :—

ALIBAUGH.	1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.	112	34	5	45	69	53
SEX.... Males.....	64	19	2	24	33	28
SEX.... Females.....	48	15	3	21	36	25
CASTE.. Hindoos	89	23	..	15	43	34
CASTE.. Mussalmans ..	10	3	5	..	7	5
CASTE.. Christians	4	3	..	3	1	2
CASTE.. Parsees	..	1	..	..	..	
CASTE.. Other Castes ..	9	4	..	27	18	12
AGE.... Under one year.	..	..	..	..	23	..
AGE.... Above one year.	..	..	..	..	46	..
RESULT. Successful....	84	25	5	42	55	42
RESULT. Unsuccessful..	11	8	..	3	5	5
RESULT. Doubtful	17	1	..	..	9	6
Percentage of Success....	75·0	73·5	100·0	93·3	79·7	84·3

1856.—Mr. Hearn reports :—

"Forty-five (45) children have been vaccinated during the year ending 30th December 1856: three (3) failed, and did not again present themselves for revaccination, one (1) was revaccinated with success that had failed previously."

1857.—There were sixty-nine (69) vaccinations performed, of which fifty-five (55) were reported to be successful, five (5) were unsuccessful, and nine (9) doubtful. Mr. Hearn states :—"The children of the police have been generally allowed to receive vaccination."

Bandora Dispensary.—Sub-Assistant Surgeon M. Misquitta.

Table of Vaccination for five years and average :—

BANDORA.	1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.	5	35	41	309	76	93
SEX.... Males	4	27	24	150	51	51
SEX.... Females	1	8	17	159	25	42
CASTE.. Hindoos	1	24	15	29	20	18
CASTE.. Mussalmans ..	..	2	1	8	1	2
CASTE.. Christians....	2	7	24	237	47	63
CASTE.. Parsees	2	2	1	4	3	3
CASTE.. Other Castes..	..	..	..	31	5	7
AGE.... Under one year.	..	..	..	..	42	..
AGE.... Above one year.	..	..	..	..	34	..
RESULT. Successful....	2	30	28	272	70	80
RESULT. Unsuccessful..	..	..	..	9	3	2
RESULT. Doubtful	3	5	13	28	3	11
Percentage of Success	40·0	85·7	68·2	88·0	92·1	74·8

1856.—The Sub-Assistant Surgeon reports:—"That the number of children vaccinated this year is three hundred and nine (309), from which it would appear that vaccination is making good progress." He then enters into some particulars of the difficulties he has to contend with, arising from the ignorance and prejudice of the people—both Christians and Hindoos. Nevertheless he devoted three days in each week for vaccination at different stations: one day at the Dispensary, another in the centre of the village, and a third at a village three miles off. He mentions that endeavours to prosecute vaccination are met by evasion on the part of parents who, when Small-pox is prevalent, say that "it is too late to vaccinate, or that it becomes a matter of danger," and that when Small-pox is absent, they object to have their children unnecessarily pained.

1857.—Mr. Misquitta states—"The number vaccinated during the year has fallen to seventy-six (76), owing to the prevalence of Measles and absence of Small-pox." Of these seventy-six (76) seventy (70) appear to have been successfuly vaccinated.

UNDER THE SUPERINTENDING SURGEON POONA DIVISION.

Poona.—Assistant Surgeon J. Keith, M.D.—One (1) Vaccinator on Rupees eighteen (18) per mensem.

Table of Vaccination for five years and average :—

POONA.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		1,166	1,438	1,594	1,681	1,692	1,514
SEX....	Males.....	646	820	890	950	992	859
	Females.....	520	618	704	731	700	655
CASTE..	Hindoos	916	1,109	1,328	1,373	1,305	1,206
	Mussalmans ..	139	167	121	155	145	146
	Christians	104	143	131	136	222	147
	Parsees	..	9	13	16	18	11
	Other Castes..	7	10	1	1	2	4
AGE....	Under one year.	..	..	..	..	529	..
	Above one year.	..	..	..	..	1,163	..
RESULT.	Successful....	894	1,182	1,307	1,435	1,424	1,249
	Unsuccessful..	94	67	62	49	70	68
	Doubtful	178	189	225	197	198	197
Percentage of Success		76·6	82·2	82·0	85·3	84·1	82·0

1856.—The Civil Surgeon reports that—

"During the year 1856, the total number of persons vaccinated has been one thousand six hundred and eighty-one (1,681), of whom one thousand four hundred and thirty-five (1,435) were successful. The lymph during the year has been good; supplies have been sent to several stations, and in all found, I believe, to be very successful. During the past year I have met with only two (2) cases of Small-pox in a male and female Christian adults, which were treated in the Civil Hospital."

1857.—In the Report of this year Dr. Keith states:—

"The total number of vaccinations for 1857 amounts to one thousand six hundred and ninety-two (1,692): of these one thousand four hundred and twenty-four (1,424) were successful, seventy (70) unsuccessful, and one hundred ninety-eight (198) doubtful. The difference from last year is an increase of eleven (11) of the total number of vaccinations, but a decrease of eleven (11) in those successfully vaccinated. In the sexes for 1856, the percentage of success is the same in each, namely 85·3 per cent. In last year the percentage of success in males is 84·6, and in females 83·4. The lymph and vesicles have been invariably good during the year. A few cases of Small-pox occurred in the city at the beginning of the year. Inoculation is not in use at this station, but many castes entertain the superstitious notion that their children should be vaccinated on certain lucky days, and in this way obstruction is frequently occasioned."

Ahmednuggur.—Assistant Surgeon J. G. Fraser.—One (1) Vaccinator on Rupees nine (9) per mensem.

Table of Vaccination for five years and average:—

Ahmednuggur.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		287	830	947	1,052	1,112	846
Sex....	Males	168	476	554	616	661	495
	Females.....	119	354	393	436	451	351
Caste..	Hindoos.....	204	615	754	832	917	665
	Mussalmans ..	46	167	168	188	166	147
	Christians	24	45	24	32	28	31
	Parsees	..	..	1	..	1	..
	Other Castes..	13	3	..	..	..	3
Age....	Under one year.	..	..	..	..	93	..
	Above one year.	..	..	..	..	1,019	..
Result.	Successful ...	237	750	913	1,033	1,093	805
	Unsuccessful ..	40	59	16	3	5	25
	Doubtful	10	21	18	16	14	16
Percentage of Success		82·5	90·3	96·4	98·0	98·2	93·1

1856.—It is stated by the Civil Surgeon that—

"During the year 1856 vaccination has been carried on, as usual, by the Assistant Vaccinator attached to the Civil Hospital. Great reluctance has had to be contended against, in many instances, but the result of last year, as compared with former years, has been on the whole satisfactory, showing a considerable increase in the numbers vaccinated. Very few cases of Small-pox have occurred during the past year. The lymph used for vaccination has been very good, and in very few cases has it failed to produce a pustule. The Assistant Vaccinator has been most assiduous and persevering in his duties throughout the past year."

1857.—Dr. Fraser states:—

"The numbers vaccinated during the past two years have been as follows: in 1856,—one thousand and fifty-two (1,052); in 1857,—one thousand one hundred and twelve (1,112)—showing an excess of fifty (50) vaccinations for the year 1857 over that of the previous year 1856. It is of importance to remark that the number of unsuccessful cases has been considerably less during the past two years than at a former period.

"In addition to the vaccinations that have been carried on by the Station Vaccinator among

the inhabitants of the city and through the station of Ahmednuggur, vaccination has also been performed by the Hospital Establishments of the Civil Jail and Police Hospitals, at the Civil Dispensary, and at the Branch Dispensary of the Police Hospital.

"The following table shows the result of last year's vaccination by the different Establishments under the Civil Surgeon:—

By the Station Vaccinator	749
By the Hospital Establishments of the Civil Jail and Police Hospitals.	17
At the Civil Dispensary	319
At the Branch Dispensary	27
Total No. of Vaccinations....	1,112

"Out of one thousand one hundred and twelve (1,112) vaccinations there have been six hundred and sixty-one (661) males vaccinated, and four hundred and fifty-one (451) females: of whom nine hundred and seventeen (917) were Hindoos, one hundred and sixty-six (166) Mussulmans, one (1) Parsee, and twenty-eight (28) Christians; ninety-three (93) were under one (1) year, and one thousand and nineteen (1,019) were above one (1) year of age; and the result has been one thousand and ninety-three (1,093) of successful cases, five (5) unsuccessful, and fourteen (14) doubtful; the percentage of successful cases has been 0·98. The lymph used has in general proved good and effectual, and the vesicles have almost invariably presented a healthy appearance. No Small-pox has been prevalent at Ahmednuggur during the past year, and it has not come within my knowledge that inoculation or any other obstruction to the spread of vaccination exists at this station.

The Assistant Vaccinator has been most attentive to his duty during the past year, and his services have been made available for carrying on vaccination in the Camp and Military Bazar, both of the Artillery and Native Infantry Hospitals, as well as in the Native city and suburbs. The numbers vaccinated by him within the limits of the Military Camp are not included in this Report.

Sattara.—Assistant Surgeon C. Wiehe, M.D.—One (1) Vaccinator on Rupees eighteen (18) per mensem.

Vaccination for five years and average:—

Sattara.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		4,848	3,341	3,134	1,661	1,233	2,843
Sex	Males.....	2,697	1,907	1,713	914	648	1,576
	Females.....	2,151	1,434	1,421	747	585	1,267
Caste..	Hindoos.....	4,622	3,122	2,929	1,542	1,140	2,671
	Mussalmans ..	136	160	106	110	75	117
	Christians	4	12	8	5	10	8
	Parsees	..	1	91	1	1	19
	Other Castes..	86	46	..	3	7	28
Age....	Under one year.	..	..	..	..	560	..
	Above one year.	..	..	..	..	673	..
Result.	Successful....	3,839	3,078	2,867	1,467	1,069	2,464
	Unsuccessful..	237	18	..	23	29	61
	Doubtful	772	245	267	171	135	318
Percentage of Success		79·1	92·1	91·4	88·3	86·6	87·5

1856.—The Acting Civil Surgeon (Mr. Maitland) makes the following report:—

"During the past twelve months one thousand six hundred and sixty-one (1,661) children have been vaccinated: of these one thousand four hundred and sixty-seven (1,467) were successful cases, twenty-three (23) failed, and one hundred and seventy-one (171) children were not seen after the operation. From a statement showing the comparative difference of the numbers vaccinated last year with that of the preceding,* a decrease of one thousand four hundred and seventy-three (1,473) operations is exhibited, the reason of this deficit is probably the prevalence of cholera during the monsoon months; for it has been found that on the outbreak of this epidemic, vaccination is always carried on with great difficulty, through fear and prejudice of the adult population. The town and neighbourhood have been quite free from Small-pox during the period under review."

1857.—The Civil Surgeon Mr. Wiehe states :—

"The number vaccinated in 1857 amounted to one thousand two hundred and thirty-three (1,233), being a decrease from last year of four hundred and twenty-eight (428). This falling off may, to a considerable extent, be accounted for by the fact that during nearly the whole of the year one of the Vaccinators attached to the Superintendent of Vaccination Southern Deccan Division was at the Hoozoor, and carried on vaccination in villages in the neighbourhood, which were generally visited by the Assistant Vaccinator attached to the Civil Hospital. The excitement of the public mind in the town of Sattara during the last monsoon may not unwarrantably be adduced as another reason.

"As regards sex, the male and female children appear to be pretty equally balanced. It is to be desired in reference to age, that the preponderance should be in favor of those under one year, but time and reiterated persuasion are the only remedies. As to the result, out of one thousand two hundred and thirty-three (1,233) vaccinations, only one hundred and thirty-five (135) were doubtful, and twenty-nine (29) unsuccessful. The percentage of successful cases in 1856 was 88·3, and in 1857 86·6. The lymph in use has, on the whole, been good, as shown by the results, and the vesicles, though not so large and well formed as could be desired, have been generally of the average size and appearance. No cases of Small-pox have occurred during the past year, nor have any obstructions, as far as have been brought to my notice, impeded the progress of vaccination."

Dhoolia.—Assistant Surgeon M. M. McKenzie.—One (1) Vaccinator at Rupees twelve (12) per mensem.

Table of Vaccination for five years and average :—

Dhoolia.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		222	681	1,510	989	924	865
Sex....	Males.....	125	352	775	519	474	449
	Females.....	97	329	735	470	450	416
Caste..	Hindoos.....	208	613	1,330	860	795	761
	Mussalmans ..	7	60	174	113	122	95
	Christians	7	8	6	12	6	8
	Parsees	..	..	..	..	1	..
	Other Castes..	..	..	..	4	..	1
Age....	Under one year.	..	..	..	..	659	..
	Above one year.	..	..	..	..	265	..
Result.	Successful....	106	608	1,449	931	867	792
	Unsuccessful..	58	46	6	..	1	22
	Doubtful	58	27	55	58	56	51
Percentage of Success		47·7	89·3	95·9	94·1	93·8	84·2

* Table No. 2 Appendix.

1856.—The total number vaccinated during the year 1856 was nine hundred and eighty-nine (989), of which nine hundred and thirty-one (931) cases were successful, compared with last year there has been a decrease of five hundred and twenty-one (521).

The Civil Surgeon writes :—

1856.—" The important duty of vaccination is carried on with zeal and ability by the Native Vaccinator, but as usual great obstruction lies in his path from the prejudices of the Natives. I trust, however, that the distribution of the papers lately sent to Medical Officers,* may go a great way in removing the prejudice of the Natives, and that they may learn the benefits sought to be conferred on them. The lymph is always good and abundant, and at various times glasses of it have been forwarded to Medical Officers at surrounding stations."

1857.—" During the year 1857 nine hundred and twenty-four (924) cases have come under the Vaccinator's notice, (of which one was unsuccessful and fifty-six (56) doubtful, the parties having left Dhoolia,) being sixty-five (65) fewer than that for the year 1856, and five hundred and eighty-six (586) less than that for 1855. The percentage of successful cases has been 93·8, while for 1856 it stood at 94·1: of the eight hundred and sixty-seven (867) successful operations four hundred and seventy-four (474) were males, and four hundred and fifty (450) females; seven hundred and ninety-five (795) were of the Hindoo caste, one hundred and twenty-two (122) Mussulmans, six (6) Christians, and one (1) Jew. Regarding the age of the children six hundred and fifty-nine (659) were *under* one year, and two hundred and sixty-five (265) *above* it. The lymph, with few exceptions, has been good and plentiful; the vesicles have risen well on the third or fourth day, and although instances have been brought to my notice of refusal to allow the Vaccinator to take away the matter or crust, yet generally speaking there is very little trouble. I am glad to be able to report the almost entire absence of Small-pox for the past year, four (4) cases only having been met with, three (3) of which were of the confluent type, one of whom died after four days illness. This exemption from disease is no doubt partly attributable to the cleanliness of the town, the width of the various streets, and the improved style of buildings now generally adopted. After close observation, pursued ever since my arrival in Dhoolia, I have not been able to detect the practice of inoculation amongst the natives; but if this obstruction does not come in the way of vaccination, the want of the proper and open recognition of vaccination by the Civil Authorities is very damaging to its successful progress. There is no doubt a feeling of dislike and distrust to a certain extent in the minds, of not only the lower and uneducated, but also amongst the higher and better educated natives. Did this latter body countenance the spread of vaccination, there can be little doubt that the whole of the lower classes would follow their example.

* This refers to Dr. Broughton's papers to be noticed hereafter.

Nassick.—Surgeon S. M. Pelly, afterwards Sub-Assistant Surgeons Shamrao Narayen, and R. Spencer.—One (1) Vaccinator at Rupees nine (9) per mensem.

Table of Vaccination for five years and average :—

Nassick.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		452	1,255	1,390	1,461	1,432	1,198
Sex....	Males.....	224	607	822	795	759	641
	Females.....	228	648	568	666	673	557
Caste..	Hindoos.....	433	1,193	1,347	1,408	1,279	1,133
	Mussalmans ..	14	45	37	46	42	36
	Christians	5	17	6	7	3	8
	Parsees	..	..	..	..	..	..
	Other Castes..	..	..	..	..	108	21
Age....	Under one year.	..	..	..	..	899	..
	Above one year.	..	..	..	..	533	..
Result.	Successful....	253	966	1,091	1,602	1,015	878
	Unsuccessful..	131	46	33	72	60	68
	Doubtful	68	243	266	327	357	252
Percentage of Success		55·9	76·9	78·4	72·6	70·8	70·9

1856.—The late Civil Surgeon (Mr. Pelly) states :—

"Vaccination has been carried on during the year 1856 by the Assistant Vaccinator under my immediate supervision. The number vaccinated during the year being one thousand four hundred and sixty-one (1,461).

"The Vaccinator and Hospital Assistants have done their utmost, I believe, to vaccinate as many as possible, but the prejudices against the operation are still very strong. The lymph has been, with the exception of a short period during the rains, remarkably good, and a supply has been constantly kept up."

1857.—The total number vaccinated was one thousand four hundred and thirty-two (1,432), of which eight hundred and sixty-seven (867) were reported to be successful, *i. e.* about 70·8 per cent.

Mahableshwur.—Surgeons J. W. Winchester, L.L.D., and G. G. W. Maitland.

Table of Vaccination for five years and average :—

Mahableshwur.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		35	175	66	118	..	79
Sex ...	Males.....	19	114	35	67	..	47
	Females.....	16	61	31	51	..	32
Caste..	Hindoos	23	154	40	67	..	57
	Mussalmans ..	10	12	7	23	..	10
	Christians	1	9	18	27	..	11
	Parsees	..	..	1	1	..	
	Other Castes..	1	..	..	..	..	
Age....	Under one year.	..	..	..	..	..	..
	Above one year.	..	..	..	..	..	..
Result.	Successful....	16	143	59	78	..	59
	Unsuccessful..	19	10	4	30	..	11
	Doubtful	..	22	3	10	..	9
Percentage of Success....		45·7	81·7	89·4	66·1	..	56·6

The Superintendent, Dr. Winchester, states :—

" During the year 1856 every attention has been directed towards the extension of vaccination in this district. The stock has been allowed to die out twice in consequence of no children being procurable in or around Malcolm Peit to operate on. The vaccine matter was obtained from Sattara and Poona, and from both the vesicles were very perfect, especially from that obtained at Poona. Small-pox is a very uncommon disease on the table-land of Mahableshwur, and it was therefore considered unusual when this epidemic appeared in the village of Mahableshwur during the monsoon. Twenty children, whose ages varied from four to twelve, were attacked—four with confluent, sixteen with modified Small-pox. The disease was propagated by a boy of twelve years of age, who had come from Petishwar near Sattara, where his brother had died of Small-pox. All recovered, save one child. A similar out-break of Small-pox has not been known in this district for thirty years, during which period, as far as I can ascertain, the disease has now and then shown itself, but never in a fatal shape. In December there was only one child remaining to be vaccinated in the village of Mahableshwur, which contains upwards of eighty houses.

1857.—No vaccination reported.

The Acting Superintending Surgeon Poona Division (Dr. Morehead) reports,—under date 13th March 1858*—on vaccination in 1857 under Superintendents and Civil Surgeon, generally in his Division. Of the latter he states :—

" The total vaccinations under the Civil Surgeons in 1856 amounted to six thousand nine hundred and sixty-two (6,962), those of 1857 to six thousand three hundred and ninety-three (6,393), showing a decrease in the last year of five hundred and sixty-nine (569). A reference to the Return† will show that the decrease has been general, with exception of the stations of Poona and Ahmednuggur, in which there has been an increase of eleven (11) and sixty (60)

* Before 1857 Superintending Surgeons did not report on the state and progress of vaccination in their Divisions as a special subject.

† Table 2 for 1857 Appendix.

respectively. The decrease in the vaccinations by the Establishment of the Northern Deccan Division is attributed, and no doubt justly, by the Superintendent, to the circumstance of the number of Vaccinators having been for part of the year reduced from dismissal and resignations.* The falling off in the station of Sattara is considered by the Civil Surgeon to have been chiefly due to the circumstance of one of the Vaccinators of the Southern Division present with the Hoozoor, having vaccinated in villages adjoining Sattara usually visited by the Station Vaccinator; but partly also to the disturbed state of the district. The decrease at Nassick may also be attributed to the disturbed state of the country. The vaccinations at Ahmednuggur show a satisfactory and progressive increase.

The number of males vaccinated exceed the females by six hundred and seventy-five (675). The vaccinated *above* one year exceed those *under* one year by nine hundred and fifty-three (953), that is, the total vaccinations above one year amount to three thousand six hundred and fifty-three (3,653), whereas those under one year are two thousand seven hundred and forty (2,740). But in the Superintendent's Returns, p. 13,† the vaccinated under one year are only three thousand six hundred and fifty-one (3,651), whilst those above one year are sixteen thousand nine hundred and twelve (16,912). This is a startling fact, and convincingly proves that notwithstanding the efforts of half a century this prophylactic has not in truth secured an appreciable hold on the affections of the people.

The percentages of successful vaccinations is 85·5, of unsuccessful and doubtful ones (which for all practical purposes may be classed together) 14·5. I presume that a portion of the doubtful and unsuccessful cases are vaccinated again, and again entered in the Returns. If so, "the total number vaccinated" expresses an excess over the total individuals, *i. e.* members of a community vaccinated. To my mind there seems no gain in this cumbrous system, and that the simple and straightforward course would be to enter as vaccinated only those on whom the operation has been undoubtedly successful. It can be of no interest or importance to any one to know the number of arms that a Vaccinator has pricked. The question of importance is, what number of members of a community have received the benefits of this prophylactic.

The quality of the lymph has been favorably reported on throughout the Division. Few Returns of Small-pox have been made to the Superintendent. A few cases occurred in the city of Poona at the beginning of the year, and Small-pox was in that district (Dhoolia) during the rains. The Reports generally show that there has not been much Small-pox in the Division during the past year. No inoculation with Small-pox reported; and no particular obstruction offered to vaccination."

"The necessity of improving the condition and prospects of the Native Vaccinators cannot, I apprehend, admit of doubt. To understand thoroughly the conditions necessary to insure true vaccinations requires considerable intelligence. Steadily to enforce the observance of these conditions requires patience, energy, perseverance and integrity. To expect these qualities from men on the scanty allowance allotted to Native Vaccinators, and without prospect of pension when unfit for service, is to expect what is not consonant with human nature. The inference which I have always drawn from these facts, and which I have already published, is that of vaccinations recorded as successful, a considerable proportion have probably no title to be so regarded. That, with an agency such as much of that which is at present employed, to suppose that an effort is being made at all, commensurate with the vast importance of the object, is nothing short of a great and most unfortunate delusion.

* Vide Superintendent's Report Northern Deccan Division p. 13 *ante*.

† And in Table No. 1 Appendix.

UNDER THE SUPERINTENDING SURGEON NORTHERN DIVISION.

Ahmedabad—Assistant Surgeon D. Wyllie, M.D.—One (1) Vaccinator on Rupes twenty-four (24) per mensem.

Table of Vaccination for five years and average :—

AHMEDABAD.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		3,004	3,117	3,208	2,712	2,782	2,965
SEX....	Males.....	1,793	1,704	1,636	1,463	1,451	1,609
	Females.....	1,211	1,413	1,572	1,249	1,331	1,356
CASTE..	Hindoos	2,647	2,839	2,781	2,353	2,353	2,594
	Mussalmans ..	332	252	413	335	418	350
	Christians	18	20	12	21	7	16
	Parsees	7	3	2	3	4	4
	Other Castes..	..	3	..	..	..	1
AGE....	Under one year.	..	..	..	..	1,292	..
	Above one year.	..	..	..	..	1,490	..
RESULT.	Successful....	2,424	2,695	2,935	2,502	2,607	2,633
	Unsuccessful..	362	253	171	123	89	200
	Doubtful	218	169	102	87	86	132
Percentage of Success		80·6	86·4	91·4	92·2	93·7	88·9

1856.—The Superintending Surgeon states :—

"Vaccination is much encouraged in the city by Dr. Wyllie, and practised extensively by the Assistant Vaccinator attached to the Civil Hospital."

The total number vaccinated was two thousand seven hundred and twelve (2,712), of which only two hundred ten (210) failed; compared with the preceding year there is a diminution of four hundred ninety-six (496) of the total vaccinated.

1857.—The Civil Surgeon makes the following report :—

" Throughout the city of Ahmedabad and the adjacent neighbourhood, the benefits of vaccination have been steadily promulgated during each month of the year now under report. The supply of lymph has always been abundant, and at no time has its application been otherwise than successful. The total number vaccinated during the year amounted to two thousand seven hundred and eighty-two (2,782), of which eighty-nine (89) cases were unsuccessful, and eighty-six (86) doubtful,—thus showing a favorable contrast with the previous twelve months, both as regards number and success. The total vaccinated in this period being two thousand seven hundred and twelve (2,712), of which one hundred and twenty-three were unsuccessful, and eighty-seven (87) doubtful. That vaccination, as a prophylactic, is held in high estimation by the inhabitants, is incontestably shown in the willingness with which children are submitted to the operation. When it happens, as it occasionally must do, that the Native Vaccinator has been for some time absent from a particular district of the city, groups of mothers with their little ones are frequently to be seen waiting his convenience to have their children vaccinated. The Native Vaccinator is in every respect a person calculated to ensure the successful application of a remedy against which some prejudice will occasionally be found to exist, by the kindness, perseverance, and attention which I have reason to believe he habitually pursues. It is gratifying to be able to tell that not a single instance of inoculation for Small-pox is known to have occurred,—a faithful augury that the occupation of the Tikadar is fast falling into desuetude."

Kaira.—Assistant Surgeons R. Bayne, M.D., and G. F. H. Brown.—One (1) Vaccinator on Rupees nine (9) per mensem.

Table of Vaccination for five years and average:—

KAIRA.	1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.	400	949	684	843	1,448	865
SEX.... Males.....	227	500	380	508	916	506
SEX.... Females.....	173	449	304	335	532	359
CASTE.. Hindoos	346	839	604	733	802	665
CASTE.. Mussalmans ..	54	109	77	108	207	111
CASTE.. Christians	..	1	2	1	3	1
CASTE.. Parsees	..	..	1	1	..	1
CASTE.. Other Castes..	..	..	..	..	436	87
AGE.... Under one year.	..	..	..	..	483	..
AGE.... Above one year.	..	..	..	..	965	..
RESULT. Successful....	360	894	654	819	1,267	799
RESULT. Unsuccessful..	16	21	12	2	177	46
RESULT. Doubtful	24	34	18	22	4	20
Percentage of Success	90·0	94·2	95·1	97·1	87·5	92·8

1856.—The Civil Surgeon (Dr. Bayne) states:—

"Lymph good and vaccination progressing. There were eight hundred and forty-three (843) operations performed, and only twenty-four (24) instances of failure, compared with last year there has been an increase of one hundred and fifty-nine (159) cases."

1857.—The Civil Surgeon (Mr. Brown) reports:—

"The total number vaccinated during the previous year was eight hundred and forty-three (843), that for the year 1857 was one thousand four hundred and forty-eight (1,448), showing an increase of six hundred and five. The reason of this great increase appears to be, that the Station Vaccinator, on account of the death of the Assistant Vaccinator, went round the villages in the immediate neighbourhood of Kaira, and has included these in his Report. As regards sex, there has been the greatest number of males vaccinated, and with respect to age, more *above* than *under* one year. The result has shown a percentage of successful cases amounting to 87·5. The lymph and vesicles are generally healthy. There have been only two or three cases of Small-pox brought to notice, and nothing going on in any way to obstruct vaccination."

Surat.—Surgeon R. Dent.—One (1) Vaccinator on Rupees eighteen (18) per mensem.

Table of Vaccination for five years and average:—

SURAT.	1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.	1,390	1,194	1,070	1,175	1,894	1,345
SEX.... Males	742	648	583	620	1,012	721
SEX.... Females.....	648	546	487	555	882	624
CASTE.. Hindoos	1,075	879	819	862	1,335	994
CASTE.. Mussalmans...	292	284	227	258	480	309
CASTE.. Christians	2	6	4	9	9	6
CASTE.. Parsees	21	25	20	46	64	35
CASTE.. Other Castes..	..	..	..	..	6	1
AGE.... Under one year.	..	..	..	..	596	..
AGE.... Above one year.	..	..	..	..	1,298	..
RESULT. Successful....	1,181	1,085	978	1,040	1,647	1,186
RESULT. Unsuccessful..	209	105	86	124	204	146
RESULT. Doubtful	..	4	6	11	43	13
Percentage of Success	85·0	90·8	91·4	88·5	86·9	88·5

1856.—The Superintending Surgeon reports that—

"Vaccination is extensively practised by the Assistant Vaccinator attached to the Hospital, and encouraged by Dr. Dent in Surat and the surrounding districts.

"The total number vaccinated in 1856 was one thousand one hundred and seventy-five (1,175) being an increase of one hundred and five (105) over the former year: of those vaccinated about 88·5 were successful."

1857.—The Civil Surgeon (Mr. Dent) reports that:—

"The table shows a much greater amount of work done this than last year. I think the principal cause for this is increased activity on the part of the Vaccinator. A ratio of diminution in the degree of success in proportion to increased work, is to be looked for, I apprehend, but no special causes for the 2 per cent. falling off has been observed.

"The vesicles in such cases as I have seen have been regular in form, but very small, and the lymph, in many instances, turgid; but it has produced in healthy European children generally a regular well developed vesicle, and pure lymph; so it is fair to presume the vaccine quality remains. Attempts to introduce a fresh supply have all failed."

Broach.—Assistant Surgeon J. Glen.—One (1) Vaccinator on Rupees nine (9) per mensem.

Table of Vaccination for five years and average:—

Broach.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		887	1,273	1,534	1,447	1,535	1,335
Sex....	Males.....	546	798	921	911	922	819
	Females.....	341	475	613	536	613	516
Caste..	Hindoos	689	918	1,139	997	1,053	959
	Mussalmans ..	167	321	370	423	456	347
	Christians	7	..	..	..	2	2
	Parsees	24	34	25	27	24	27
	Other Castes..	..	..	..	..	..	..
Age....	Under one year.	..	..	..	..	807	..
	Above one year.	..	..	..	..	728	..
Result.	Successful....	773	1,090	1,412	1,300	1,372	1,189
	Unsuccessful..	95	90	60	67	71	77
	Doubtful	19	93	62	80	92	69
Percentage of Success....		87·1	85·5	92·0	89·4	89·3	88·7

1856.—The Acting Civil Surgeon states:—

"One thousand four hundred and forty-seven (1,447) persons have been vaccinated during 1856, being an increase of eighty-seven (87) over last year. This increase may partly be accounted for by a greater number of children being procurable in the earlier months of the year, as also probably the greater willingness of the people to submit to the process of vaccination. One troublesome circumstance is occasionally met with: the children after being vaccinated sometimes absent themselves altogether, in consequence of the parents disliking the lymph being removed. Parsees and Brahmins have the strongest objections to vaccination, some from religious motives, and some apparently without being able to furnish any reason whatever."

1857.—The Civil Surgeon states:—

"During the year 1857, one thousand five hundred and thirty-five (1,535) children of both sexes have been vaccinated: of these six hundred and thirteen (613) have been

females, and nine hundred and twenty-two (922) males; of these again eight hundred and seven (807) have been children under one year old, and seven hundred and twenty-eight (728) have been above that age. Compared with the previous year, the numbers have increased somewhat, the twelve months of 1856 showing at the time a total of one thousand four hundred and forty-seven (1,447) operations, making a difference in favor of last year of eighty-eight (88). This increase has been occasioned by the larger number of female children having been vaccinated in the year 1857, showing an increase of seventy-seven (77) females over the numbers of the previous year, leaving only eleven (11) males to make up the difference between the two years. It is not easy to say whether this difference between the two sexes has any determinate bearing upon the question of male and female births amongst the population generally, or whether it arises from accidental alternations and changes found to occur amongst communities of living beings, as well as in the organic and inorganic worlds. Probably both causes have been in operation, and the fluctuating state of the community in and around Broach, especially at certain seasons has, this year, by a fortuitous assemblage of circumstances, produced this result. In the first part of the year the numbers diminished in some of these months considerably, especially in the months of March and May. There being in the first mentioned month a falling off of one half the number of the corresponding period of the preceding year, whilst from the beginning of July till the end of December, a steady increase over the last six months of 1856 was observable. The cause of this disparity in numbers appears to be that the cotton season of 1857 was much later than ordinary seasons, at which periods large bodies of labourers with their children, from the districts, seek the town to obtain employment in cotton cleaning; but on their arrival this year, it was found the Village Vaccinators had been already amongst the majority of them, and consequently there were fewer children to operate upon in Broach. There is an average influx at such times of persons from the different Zillahs amounting to four thousand (4,000) men and women. Thus, had the cotton season of 1857 been favorable, a larger number than the present would have been shown in the Returns. The successful cases of vaccination have amounted to 94·9 per cent. The lymph remains good, and the condition of the vesicles is every way desirable. Some cases of Small-pox have appeared throughout the year in the town, but the people do not desire medical interference, and it is only by accident a knowledge of the fact is attained. No inoculation is practised in Broach, so far as I am acquainted, and I have made special inquiries upon this point. From what therefore has been said, vaccination in Broach progresses favorably in spite of the objections raised by Brahmins and Parsees, from whom more enlightened views might not unreasonably be expected. Another difficulty is also met with amongst the towns-people, that whilst generally speaking, they are willing enough to submit their children for vaccination when solicited, they strongly object to the vaccine matter being removed, in consequence of which they secret their children, and it is not without some trouble occasionally they are ferreted out from their hiding places, when the parents then acquiesce in our arrangements. The district people on the other hand offer no objections whatever.

"To overcome this prejudice on the part of the towns-people must be left to the progress of time and to the repeated assurances of Vaccinators and their Establishments, that the transmissions of the virus from their offspring to other children will cause the former no harm, for by a strange perversity of reasoning they anticipate no evil to their own child from the vaccine matter of another, but at once conjure up visions of loss of caste, disease and death, when they are desired to allow it to be transmitted from their charges, to another being similar to themselves. Of such blind folly time alone must be the eradicator.

Bhooj.—Sub-Assistant Surgeon Sadasew Hemraj.

Table of Vaccination of five years and average :—

Bhooj.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		61	218	7,345	6,186	38	2,769
Sex....	Males.....	38	116	4,137	3,626	23	1,588
	Females.....	23	102	3,208	2,560	15	1,181
Caste..	Hindoos	22	95	5,227	2,951	30	1,665
	Mussalmans ..	39	122	2,118	3,235	8	1,104
	Christians	..	1	..	..	..	
	Parsees	..	..	..	..	..	..
	Other Castes..	..	..	..	..	..	..
Age....	Under one year.	..	..	..	..	5	..
	Above one year.	..	..	..	..	33	..
Result.	Successful	25	194	7,046	5,830	28	2,624
	Unsuccessful..	35	22	..	6	5	14
	Doubtful	1	2	299	350	5	131
Percentage of Success		41·0	89·0	95·8	94·2	73·8	78·8

1856.—Six thousand one hundred and eighty-six (6,186) vaccinations were performed, of which about 94 per cent. proved successful, compared to last year there was a diminution of one thousand one hundred and fifty-nine (1,159).

Mr. Sub-Assistant Surgeon Sadasew Hemraj makes the following report :—

"It is to be regretted that much difficulty is experienced in getting subjects for vaccination in Bhooj, the inhabitants being greatly opposed to it. There is a belief prevalent in Bhooj that allowing their children to be vaccinated would provoke the goddess who now is supposed to preside over Small-pox."

"The Native Vaccinators who carried on vaccination in different parts of Kutch returned to Bhooj, according to the wishes of His Highness the Rao of Kutch, in the beginning of June last. They were again sent out in the latter part of November last. During this period they have vaccinated six thousand and forty-six (6,046) persons, being one thousand one hundred and seven (1,107) less than the last year. This is to be ascribed to the difficulty these Vaccinators have experienced in some of the villages belonging to the Bhagats of His Highness the Rao."

1857.—There were thirty-eight (38) vaccinations performed at the Dispensary, of which twenty-eight (28) were reported to be successful. No Returns or reports for 1857 have been received of the work performed by the Vaccinators employed by His Highness the Rao of Kutch.

Rajkote.—Surgeon J. R. Miller, M.D., and Assistant Surgeon R. G. Lord, M.D.

Table of Vaccination for five years and average :—

Rajkote.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		6,365	2,503	2,486	1,752	524	2,726
Sex....	Males.....	3,614	1,376	1,363	935	264	1,510
	Females.....	2,751	1,127	1,123	817	260	1,216
Caste..	Hindoos	4,609	1,940	1,886	1,331	433	2,040
	Mussalmans ..	1,746	562	589	395	91	676
	Christians	7	1	10	26	..	9
	Parsees	3	..	1	..	..	1
	Other Castes..	..	..	..	..	..	..
Age....	Under one year.	..	..	..	..	195	..
	Above one year.	..	..	..	..	329	..
Result.	Successful....	5,880	2,358	2,313	1,612	469	2,526
	Unsuccessful..	245	43	67	57	27	88
	Doubtful	240	102	106	83	28	112
Percentage of Success....		92·3	94·2	93·0	92·0	89·5	92·2

The falling off of the numbers in 1857 compared with 1856 is explained by the station of Rajkote being now included in the Kattywar Circle, with which Returns the number vaccinated since June 1857 are incorporated. (See Kattywar Division *ante.*)

The Superintending Surgeon Northern Division (Mr. White) reports :—

"*Western Division.*—This Division of vaccination has been divided experimentally : the largest portion as stated by the Civil Surgeon of Rajkote in his Report,* being the Kattywar territory, British and Native. I am of opinion that a further period of one year should be granted to this experimental measure under the very able Superintendent, Dr. Lord.

"*Eastern Division.*—The decrease of operations and of successful results are attributed by the Superintendent, Dr. Ross, who has recently assumed charge, to the disturbed state of the country and the want of inspection of the Vaccinators, want of cordial aid by the Government officers, and opposition of the community, and in one instance want of industry of an Assistant. Small-pox inoculation has much diminished.

"*Ahmedabad.*—The report of this station is satisfactory, and not a single instance of inoculation for Small-pox is known to have occurred.

"*Kaira.*—An increase of six hundred and five (605) operations is reported. A few cases of inoculations for Small-pox have been met with.

"*Broach.*—An increase of eighty-eight (88) appears. Percentage of successful cases is large. Small-pox inoculation appears to have ceased. The opposition of Parsees is noticeable. A peculiar apprehension on the caste-question is shown at the end of the Report.

"*Surat.*—Increased zeal of the Vaccinators has obtained satisfactorv results as to the number of operations."

* Page 18 *ante.*

UNDER THE SUPERINTENDING SURGEON SOUTHERN DIVISION.

Belgaum.—Surgeon T. Waller.—One (1) Vaccinator at Rupees nine (9) per mensem.

Table of Vaccination for five years and average:—

BELGAUM.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		7,410	1,322	667	606	527	2,106
SEX....	Males.....	4,403	707	373	349	314	1,229
	Females.....	3,007	615	294	257	213	877
CASTE..	Hindoos.....	6,342	795	482	399	430	1,690
	Mussalmans ..	913	421	63	129	66	318
	Christians	155	74	120	78	31	92
	Parsees	..	..	2	..	..	1
	Other Castes..	..	32	..	..	..	6
AGE....	Under one year.	..	..	..	..	193	..
	Above one year.	..	..	..	..	334	..
RESULT.	Successful....	6,708	1,280	617	568	479	1,930
	Unsuccessful..	639	34	33	22	48	155
	Doubtful	63	8	17	16	..	21
Percentage of Success		90·5	96·8	92·5	93·7	90·8	92·8

1856.—The total number vaccinated in 1856 was six hundred and six (606), being a diminution from the previous year of sixty-one (61).

The Civil Surgeon (Mr. Waller) states:—

"The decrease exhibited arises from the fact of there being but one Vaccinator at present attached to the Civil Department instead of four as formerly, *i. e.* before 1853."

1857.—"During the year 1856 six hundred and six (606) persons were vaccinated in Belgaum, and in the year 1857 five hundred and twenty-seven (527); the decrease is almost wholly attributable to the temporary illness of the Assistant Vaccinator. A good deal of apathy, and in some cases opposition, manifests itself among the people, at times diminishing the number vaccinated. The greatest number of cases successfully vaccinated is among the youngest children, who are unable to scratch and thus destroy the vesicles. The percentage of the successful vaccinations have been 90·8. The lymph and vesicles have generally presented a normal appearance during the year. The dirty habits of the people, want of ventilation in their dwelling houses, apathy and indifference to vaccination, and a low state of civilization, are the principal reasons why Small-pox ever makes its appearance, and as no obligatory measures are countenanced by Government, the Native Vaccinators have difficulties to contend with.

"I see no other mode of insuring the effectual spread of vaccination than by making its reception obligatory on the people."

Dharwar.—Surgeon G. F. Forbes.—One (1) Vaccinator at Rupees nine (9) per mensem.

Table of Vaccination for five years and average:—

Dharwar.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		11,082	2,470	1,815	1,444	1,643	3,691
Sex....	Males.....	6,420	1,355	1,125	850	924	2,135
	Females.....	4,662	1,115	690	594	719	1,556
Caste..	Hindoos.....	9,763	2,047	1,650	1,275	1,389	3,225
	Mussalmans ..	1,317	417	156	159	248	460
	Christians	2	5	8	10	6	6
	Parsees	..	1	1	..	..	..
	Other Castes..	..	..	..	..	..	..
Age....	Under one year.	..	..	..	..	377	..
	Above one year.	..	..	..	..	1,266	..
Result.	Successful....	10,417	2,368	1,613	1,238	1,500	3,427
	Unsuccessful..	476	33	110	114	77	162
	Doubtful	189	69	92	92	66	102
Percentage of Success....		94·0	95·8	88·8	85·7	91·2	91·1

1856.—The Civil Surgeon (Mr. Forbes) states:—

"The decrease during the last few years is accounted for by the transfer of Establishment which took place in 1853 as explained in previous Returns. In February last Small-pox prevailed to some extent, and many cases of a severe confluent form were reported. In March the epidemic abated considerably, returning, however, in April, with increased virulence. May and June witnessed its decline. In July it disappeared entirely, and was not afterwards heard of until last month, when a few cases of a mild form were reported.

"Since the introduction of fresh matter in January last, the vaccine lymph has continued in good order. The vesicles, though somewhat small in size during the hot months, have generally throughout the year presented a very satisfactory appearance. The practice of inoculation is not followed in this district. The Natives willingly enough avail themselves of the services of the Vaccinator when he attends at their houses; but they will not take the trouble of bringing their children to the hospital for the purpose."

1857.—"The numbers vaccinated during the past, as compared with the previous year, show an excess in favor of the former of nearly two hundred (200) operations. This increase is partly attributable to the prevalence of Small-pox, and in part to the influence of the Vaccinator, who has improved his acquaintance with the people, to whom he was formerly comparatively a stranger. There has been no marked difference between the successful issue of the operations as regard the sex and age of the patients; but it will be observed that the numbers vaccinated under twelve months of age are comparatively small, and this is caused by a prejudice on the part of the mothers who consider that the child, until it has attained that age, is not sufficiently strong to undergo the operation. A fresh supply of lymph was introduced in the early part of the year, and since that period, with exception of one or two short intervals, it has continued in good order; accordingly the percentage of success 91·2 is rather above the former standard. The total number vaccinated during the year is one thousand six hundred and forty-three (1,643): of these one thousand and five hundred (1,500) succeeded in the first instance, ninety-six (96) did so on the operation being repeated, and seventy-seven (77) failed entirely. Small-pox appeared in January, and continued prevalent with more or less severity during the months of February, March, April, and May, since the

latter period it has not been heard of in this neighbourhood. The children of the poorer classes suffered most severely from the epidemic. Inoculation is not resorted to in this part of the country."

Sholapore.—Assistant Surgeon C. J. Sylvester, M.D.—One (1) Vaccinator at Rupees nine (9) per mensem.

Table of Vaccination for five years and average :—

Sholapore.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		884	813	1,088	1,066	1,588	1,088
Sex....	Males.....	528	529	768	635	1,073	706
	Females.....	356	284	320	431	515	381
Caste..	Hindoos.....	620	618	770	691	1,322	804
	Mussalmans ..	261	195	305	375	262	281
	Christians	3	..	6	..	4	2
	Parsees	..	..	7	..	..	1
	Other Castes..	..	..	..	..	..	..
Age....	Under one year.	..	..	..	..	260	..
	Above one year.	..	..	..	..	1,328	..
Result.	Successful....	741	675	908	838	1,387	910
	Unsuccessful..	41	..	2	74	..	23
	Doubtful	102	138	178	154	201	155
Percentage of Success		83·8	83·0	83·4	78·6	87·3	83·2

1856.—Total number vaccinated during the year 1856 is one thousand and sixty-six (1,066), during the preceding year one thousand and eighty-eight (1,088), being a decrease of twenty-two (22). The average of successful cases is about 78 per cent.

The Civil Surgeon (Dr. Sylvester) reports as follows:—

1856.—" Great pains have been taken to extend the benefits of vaccinationas widely as possible to the inhabitants of Sholapore, as well as to the patients in attendance at the Dispensary. The vaccine lymph has been of good quality, and the operations generally successful. In the beginning of the past year I found the lymph to have considerably deteriorated, the vesicles being of an abnormal appearance,—vaccination was therefore discontinued in February, until fresh matter could be procured from other stations; and a representation having been made, glasses were sent from Sattara and Poona weekly, but every operation proved unsuccessful until the beginning of the month of June, since which time the supply has been kept up. Had it not been for the above circumstance, the decrease in the number of persons vaccinated would have been less. Every assistance has been afforded by the Civil Authorities in the propagation of vaccination."

1857.—" The Vaccination Returns for the past year exhibit an increase of five hundred and twenty-two (522) cases of vaccination over the number vaccinated in the town of Sholapore during the year 1856. This increase may be accounted for partly from the fact that during three months of the year 1856, viz. the months of March, April, and May, the operations were not successful. Vaccination having been discontinued in the month of February, in consequence of the vaccine lymph employed having deteriorated, and the cases operated on with fresh lymph procured from other stations did not succeed until the month of June, since which time vaccination has been kept up without intermission, and with great success. The increase may be partly accounted for also from the increased exertions which have been made to propagate the Cow-pox, and from the Native population becoming more reconciled to the operation, and more fully appreciating the benefits attending it.

"Those of the male sex who have been operated on have exceeded the number of females by more than two-fold—one thousand and seventy-three (1,073) of the former, and five hundred and fifteen (515) of the latter, having been vaccinated; and of males those above one year of age have exceeded those under one year by upwards of five times—one thousand three hundred and twenty-eight (1,328) of the former and two hundred and sixty (260) of the latter having submitted themselves for operation; the percentage of success being 87·3. The lymph during the past year has been uniformly of good quality, and the vesicles perfect. Small-pox existed in the town of Sholapore during the hot weather, but not to any great extent. As far as I can ascertain inoculation is not practised. The principal obstruction existing to a more extended spread of vaccination is the prejudice of the Native population, which is observed chiefly amongst the better class, but from my own experience I have reason to believe that this prejudice is gradually giving way, and that the Natives of each class are becoming more and more convinced of the advantage derivable from the operation.

"The Vaccinator visits the town of Sholapore twice a week for the purpose of performing the operation attending each Peit or division of the town in turn. He is attended by two Peons, who are told off for that duty on the days of vaccination, and who assist in collecting the subjects for operation. Every assistance is afforded by the Authorities, and I have reason to be satisfied with the manner in which the Native Vaccinator attached to my department has performed his duty.

Kolapore.—Assistant Surgeon F. Broughton.—One (1) Vaccinator at Rupees eighteen (18) per mensem.

Table of Vaccination for five years and average:—

KOLAPORE.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		5,683	3,548	2,438	2,820	3,197	3,537
SEX....	Males.....	2,972	1,833	1,307	1,418	1,614	1,829
	Females.....	2,711	1,715	1,131	1,402	1,583	1,708
CASTE..	Hindoos.....	5,378	3,454	2,350	2,778	3,124	3,417
	Mussalmans ..	297	85	84	41	73	116
	Christians	7	9	4	1	..	4
	Parsees	..	..	..	..	..	..
	Other Castes..	1	..	..	..	..	
AGE	Under one year.	..	..	..	..	825	..
	Above one year.	..	..	..	..	2,372	..
RESULT.	Successful....	4,994	3,297	2,228	2,648	2,823	3,198
	Unsuccessful..	304	50	49	41	101	109
	Doubtful	385	201	161	131	273	230
Percentage of Success		87·8	92·9	91·3	93·9	88·3	90·8

1856.—The Civil Surgeon writes:—

"The progress made during the year 1856 has been highly satisfactory, as will be evident from the table.*

"An increase of three hundred and eighty-two (382) is an evidence of continued exertion on the part of my Assistant, and is conclusive that the system is gaining ground in this locality. Opposition from interested village officials was as usual experienced. These cases were immediately brought to the notice of the Political Authorities, and duly reported to the

* Table No. 2 Appendix.

Superintending Surgeon. I am happy to be enabled to report that, having been successful in proving the guilt of these parties, they met with severe and well merited punishment. These punishments at my suggestion have been published throughout the whole country, and I feel confident the happiest effects may be anticipated. I append a map* of my area of vaccination, showing its size, villages, populations, &c. On the several borders my Assistant meets the Vaccinators of several districts, and working in concert with them the whole of the ground is supposed to be visited. It is my pleasing duty to add that Small-pox has prevailed to a very slight extent in our villages during the past season, and I attribute this principally to the check, which has been given to the practice of inoculation and to the support given by Political Authorities to vaccination."

1857.—Dr. Broughton states:—

"The Station Vaccinator has, during the past year, registered three hundred and seventy-seven (377) more cases than the previous year. This success is the more satisfactory when the state of the country is taken into consideration, and I think reflects great credit upon the zeal and perseverance of my Assistant, who has kept up a good supply of lymph throughout the whole of the disturbances, although the closure of the city gates and the dangerous state of the roads necessarily offered serious impediments in the discharge of duty. I attribute this increase to the support given to the system by Political Authority in accordance with the instructions of Government. Of the three thousand one hundred and ninety-seven (3,197) cases vaccinated, one thousand six hundred and fourteen (1,614) were males, and one thousand five hundred and eighty-three (1,583) females—a greater number of males might have been expected, and the question suggests itself whether a comparison of numbers thus obtained may not exhibit an important difference between the European and Asiatic with respect to the birth of sexes. With one or two exceptions the cases were all infants. Out of the three thousand one hundred and ninety-seven (3,197) there were one hundred and one (101) failures, and two hundred and seventy-three (273) in which success was doubtful. The quality of the lymph was satisfactory. I tested it more frequently than usual during this period, from my anxiety lest the operation of the system should be suspended, owing to the mutinous state of the times. Small-pox as usual has prevailed but to no very serious extent. One inoculator has been arrested in the small district under my superintendence, and the necessity for, and advantage derived from, constant watchfulness against these importers of pestilences, has been shown in a somewhat remarkable manner. In the month of March a Concan inoculator applied to me for compensation for loss of business in the Kolapore country. He pleaded that he and his father before him had obtained their livelihood by annual tours in these districts, and that in consequence of my vigilance he was a ruined man. I sent this individual to lay his complaint before the Political Authority. I feel certain that the common people will readily embrace vaccination if cut off from the aid of the inoculator. For this reason I would recommend that heavy fines should be inflicted upon all Village Authorities who encourage or allow an inoculator to practice within their limits. Proclamations to this effect would, I think, be usefully issued every year, as without continual repetition such order would soon become forgotten. Were this system strictly carried out, I am disposed to consider compulsion would not be necessary to the full development of the great advantages of vaccination.

* This map is not published.

Rutnagherry.—Assistant Surgeon E. DeCrespigny, M.D.—One (1) Vaccinator at Rupees nine (9) per mensem.

Table of Vaccination for five years and average :—

Rutnagherry.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		316	455	862	870	971	695
Sex	Males.....	169	265	472	484	507	380
	Females.....	147	190	390	386	464	315
Caste..	Hindoos.....	307	418	832	813	735	621
	Mussalmans ..	8	36	14	53	234	96
	Christians....	1	1	16	4	2	5
	Parsees	..	..	..	..	..	..
	Other Castes..	..	..	..	..	..	..
Age	Under one year	..	..	..	..	164	..
	Above one year.	..	..	..	..	807	..
Result.	Successful....	255	447	801	633	863	600
	Unsuccessful..	58	8	61	67	57	50
	Doubtful	3	..	..	170	51	45
Percentage of Success		80·6	98·2	92·9	72·7	88·8	86·6

The Civil Surgeon (Dr. DeCrespigny) states :—

1856.—"Vaccination has been carried on during the year 1856 successfully as to numbers exhibiting an increase of eight (8) over the total of the year ending 31st December 1855. Much time has occasionally been lost by perambulating the town and suburbs of Rutnagherry in the endeavour to obtain subjects, which would have been better occupied in visiting the many villages in the neighbourhood, where subjects are always procurable. At such times as Small-pox makes its appearance the people of Rutnagherry are by no means unwilling to avail themselves of the benefits of vaccination, but I am of opinion that this disposition on their part, as well as on that of the Village Patels, (who are in the habit of making requisitions for our services,) on such occasions should not be complied with, for this reason, viz., that abnormal conditions attending the formation of vesicles are then so frequently observed as to lead to the inference that every such instance is liable to non-protection. A representation was made to me that a petition had been sent in, begging for permission to have recourse to inoculation, on the grounds that vaccination had not been attended with success in these cases; and in another instance stating that vaccination had been non-protective. Such results, I do not hesitate to ascribe generally to the abovementioned practice than which I can imagine nothing more likely to cause deterioration in the quality of the lymph."

1857.—The Civil Surgeon reports :—

"The number of persons vaccinated during the year was nine hundred and seventy-one (971). Small-pox was as usual prevalent in the early part of the year; but not to any extent in the town and immediate vicinity. The children were all vaccinated with lymph taken fresh from the arm, a child being taken by the Vaccinator for the purpose from one place to another, but there is a prejudice against the vesicle being interferred with, and the more respectable classes of Natives cannot be persuaded to consent to it. No difficulty has been experienced in obtaining children in the neighbouring villages, so long as the villagers are not occupied with their agricultural concerns, or engaged in holiday or religious ceremonies."

Vingorla.—Mr. Senior Apothecary Wright.

Table of Vaccination for five years and average :—

VINGORLA.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		167	243	102	167	202	176
SEX....	Males	86	152	54	99	127	103
	Females.....	81	91	48	68	75	73
CASTE..	Hindoos	159	171	67	92	163	131
	Mussalmans ..	8	46	13	44	36	29
	Christians	..	26	22	31	3	16
	Parsees	..	..	..	..	..	..
	Other Castes..	..	..	..	..	..	..
AGE....	Under one year.	..	..	..	..	80	..
	Above one year.	..	..	..	..	122	..
RESULT.	Successful....	158	243	102	166	201	174
	Unsuccessful..	2	..	..	..	..	
	Doubtful ...	7	..	..	1	1	2
Percentage of Success		94·6	100·0	100·0	99·4	99·5	98·7

1856.—The number vaccinated during the past year is one hundred and sixty-seven (167), an increase of sixty-five (65) over the former year.

1857.—Mr. Senior Apothecary Wright reports that :—

"The number vaccinated during the last year exceeds that of the previous year by thirty-five (35). Small-pox has been prevalent in and about Vingorla during the last three months, but the cases were mild. No obstruction exists, that I am aware of, to the effectual spread of vaccination."

The Superintending Surgeon of the Southern Division (Dr. Mackenzie) reports of 1857, under date 12th March 1858 :—

"From an inspection of the Returns* it will at once be perceived that there is a material decrease of the numbers vaccinated during the past, compared with the previous year. This unfavorable and unexpected result is attributed to the prevalence of epidemic diseases, especially cholera, and the desertion by the people of their villages in consequence; the disturbed state of the country; a reduction in the number of Vaccinators from deaths and dismissals; and imperfect supervision from the frequent changes in the Superintendent of Vaccination.

"But on a closer examination it will be found that although the above causes might, and in all probability did, operate very materially in circumscribing the practice, and retarding the extension of vaccination, there were others, and perhaps more important causes at work; for if the Returns of the Civil Surgeons be taken, an increase is every where shown, (except at Belgaum,) and in none is it more marked than at Kolapore,† where not only disease prevailed, but where men's minds must have been as unsettled as in any of the districts, if not more so.

"To the above there are apparently three exceptions, the returns from the Civil Surgeons Belgaum and Sawunt Warree‡ show a decrease, while that from the Civil Surgeon Sholapore shows an increase greater than the one from Kolapore. But when, with respect to the first, the long sickness of the Vaccinator is taken into consideration; to the second, the sickness of the Vaccinator, and the loss of the services of one of the most zealous Assistants; and to

* See Appendix Tables Nos. 1 and 2, Southern Division.

† Table No. 2, 1857, Appendix.

‡ Table No. 3, Native Chiefs' agency.

the third, that the lymph became deteriorated for some three months in 1856, the seeming contradiction disappears.

"It is then to the Returns of the Superintendent of Vaccination* that we must look for the falling off in the numbers vaccinated, and in them we must seek for an explanation of the diminished benefits of the prophylactic, and the impediments which have come in the way of its extension.

"Giving due weight to the fact† that the Government Vaccinators numbered eighteen (18) in 1856, and averaged very little more than sixteen (16) in 1857, no great increase at all events ought perhaps to have been expected,—it may even be sufficient to account for the decrease,—and altogether the Returns may not be so very unfavorable, although they cannot be viewed as satisfactory. But considering that the great obstacle to vaccination—the prejudices of the people—has been gradually yielding, I look upon any Return that does not show an extension of its benefits, as unsatisfactory.

"Adverting now to the performance of the Vaccinators employed by the Native Chiefs, I am sorry to say, that I find very little to praise, and much to be regretted. From some Vaccinators no Returns have been received, others are in arrears, and nearly all of those furnished show a decrease in the number of persons operated upon. This unfavorable result becomes still more a matter of regret, when it is considered that the number of Vaccinators was greater than in 1856; that the practice had been longer in operation; that the Vaccinators had time to learn their duty; and that the prejudices of the people might have been supposed to have partially given way. When, in short, there was every reason to expect a marked increase instead of a decrease in the amount of work done, and in the sum of the benefits conferred. In the States of the Jagheerdars, the prevalence of epidemic diseases, the disturbances, and the uneasy and unsettled feeling produced thereby, might, as in other places, have acted as impediments; but I fear that it is in the lukewarmness of the Chiefs that the principal cause is to be found. I do not here allude to the change lately made in removing the Vaccinators from the direct control of the Superintendent; for although my impression was that it would not contribute to the advancement of the cause, I am well aware that there has not been time, and that it has not yet had a fair trial, and until it may have been tried, it would, I think, be unwise to make any further alteration. I therefore, in an interview with the Superintendent of Vaccination, directed his attention to the resolution of Government on the subject, and recommended him to bring the shortcomings of the Vaccinators to the notice of the Political Superintendent, who, I have no doubt, will bestow upon the matter the attention it merits.

"In the age of the persons vaccinated very little difference is observed, the prejudice against vaccinating children under one year appearing to be almost universal—a fact much to be deplored, as the loss among children under that age during the epidemic visitations of Small-pox must be great.

"As regards the sexes, the difference in the numbers shown by some of the Returns is very remarkable. In those from Sawunt Warree and Kolapore for instance, the disparity is not very great, while in that from Sholapore the males exceed the females by more than half. To account for this satisfactorily is not easy, unless it can be attributed to some prejudice of the people which operates more powerfully in one locality than in another.

"The condition of the lymph and vesicle would seem to have been generally better during the past than the preceding year, and the percentage of success somewhat higher. In this respect the result, as shown by the Returns, appears upon the whole satisfactory.

Relative to the extension of vaccination, some would be disposed to make it compulsory, but to this there may be serious objections, and the prejudices of the people—especially those of the Brahminical, and Lingaet caste—being the great obstacle; but by steady perseverance in the means already at work, and hitherto used, it may be expected gradually to diminish

* Vide Superintendent's Report *ante*, and Table No. 1 Appendix.

† Stated by the Superintendent at p. 16 *ante*.

in strength, and ultimately to be altogether overcome. I would, however, observe, that much would seem to rest with the Political and Civil Authorities, for I believe, it may fairly be inferred from the Returns that in the districts where their countenance and support have been best afforded, the practice of vaccination have been most successful.

"As will be perceived from the report of the Civil Surgeon, Kolapore,* the race of inoculators is not altogether extinct; but, so far as is known, their practice, if any, has become very limited.

"The several reports show that, although of rather a mild type, Small-pox prevailed epidemically last year, and I regret to say that it does so again now."

Under the Superintending Surgeon Sind Division.

Kurrachee.—Assistant Surgeon J. G. Nicholson, M.D.—One (1) Vaccinator at Rupees nine (9) per mensem.

Table of Vaccination for five years and average :—

Kurrachee.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		308	1,105	1,123	628	651	763
Sex....	Males.....	171	764	722	400	368	485
	Females.....	137	341	401	228	283	278
Caste..	Hindoos.....	84	132	499	267	312	259
	Mussalmans ..	219	954	523	313	273	456
	Christians	3	17	94	31	59	42
	Parsees	2	..	6	8	4	3
	Other Castes..	..	2	1	9	3	3
Age....	Under one year.	..	..	..	..	498	..
	Above one year.	..	..	..	..	153	..
Result.	Successful....	286	898	983	589	584	668
	Unsuccessful..	22	158	70	4	39	59
	Doubtful	..	49	70	35	28	36
Percentage of Success....		92·8	81·2	87·5	93·7	89·7	89·0

1856.—The Civil Surgeon states :—

"From what I have seen, I am satisfied that many of the people have strong but frivolous objections to vaccination, while others, whose children have been vaccinated, have the greatest aversion to the removal of the lymph from their children's arms, from a fear that it nullifies the influence of the virus. The Vaccinator has on several occasions complained to me of want of sufficient countenance from Native officials, such as the Foujdar. These officials, when spoken to on the subject, deny the charge; but there can be no doubt that they are generally imbued with the same ignorant prejudices as other Natives, and that they are not likely to give much encouragement to any innovation, however beneficial, except in obedience to positive and stringent orders. The vesicles that I have had an opportunity of inspecting have generally been of an imperfect kind; but I do not know whether this is to be ascribed to a deterioration of the virus or to any other cause. In many instances I have myself taken the lymph from imperfect-looking vesicles on Native children, and with it vaccinated European children with complete success.

1857.—Dr. Nicholson reports :—

"A comparative view of the numbers vaccinated in 1856 and 1857 shows a slight increase during the past year.

* p. 56 *ante*.

"In 1856 the total number vaccinated was six hundred and twenty-eight (628), and in 1857 it was six hundred and fifty-one (651). There was a considerable diminution in the number of males vaccinated last year, while the females are much increased. I am at a loss to what to ascribe this variation. It has not been dependent on any peculiar measures adopted with regard to the children, nor do I think it has been caused by any increased liberality on the part of the people themselves. The figures show greater success during the year now ended. We had five hundred and eighty-four (584) successful cases, while in 1856 the numbers were five hundred and sixty-seven (567). The lymph, so far as I have seen it, during the past year, has been on the whole good, and I myself have vaccinated successfully many English children with lymph taken from Natives. In very many instances I have had occasion to remark that lymph taken from a very poor and imperfect-looking vesicle in a Native child has produced a great deal, both of local and constitutional, irritation in the English child. I have little doubt that the distinctive peculiarity of constitution in the two fully explains this circumstance. There have not been many cases of Small-pox during the past year, but some of them among children have been fatal in the town. I have heard of no cases of Small-pox among English people.

"I have never heard of inoculation being practised by the people, and the great obstruction to vaccination is the prejudices of the people themselves.

Kurrachee Jail.

1857.—The Civil Surgeon states:—

"All prisoners on admission into jail are examined by me, and such as are found not to have had Small-pox, or have no vaccine marks on their arms, are at once vaccinated. Seventy-four (74) persons have been vaccinated during the year, but of those only twenty-five (25) were decidedly successful. There was only one child vaccinated under one year of age. All the rest were above that age or adults. Considering the circumstances under which vaccination was performed, great success could scarcely be anticipated."

Hyderabad.—Assistant Surgeon F. W. Harris.—One (1) Vaccinator at Rupees nine (9) per mensem.

Table of Vaccination for five years and average:—

Hyderabad.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		493	2,202	2,078	2,353	1,526	1,730
Sex....	Males.....	285	1,399	1,330	1,735	914	1,132
	Females.....	208	803	748	618	612	598
Caste..	Hindoos.....	216	934	844	665	632	658
	Mussalmans ..	274	1,268	1,231	1,683	887	1,069
	Christians	3	..	3	5	6	3
	Parsees	..	..	..	..	1	..
	Other Castes..	..	..	..	..	..	..
Age....	Under one year.	..	..	..	..	797	..
	Above one year.	..	..	..	..	729	..
Result.	Successful....	483	1,961	1,937	2,243	1,313	1,587
	Unsuccessful..	10	134	73	108	129	91
	Doubtful	..	107	68	2	84	52
Percentage of Success		97·9	89·0	93·2	95·3	86·0	92·3

1856.—In this year two thousand three hundred and fifty-three (2,353) vaccinations were performed, of which two thousand two hundred and forty-three (2,243) were reported to be successful.

1857.—The Civil Surgeon states :—

"During the year 1857 the total number vaccinated was one thousand five hundred and twenty-six (1,526), and in the previous year two thousand three hundred and fifty-three (2,353), showing a deficit of eight hundred and twenty-seven (827) in this year's operations, accounted for by the circumstance that formerly all prisoners received into jail were promiscuously vaccinated and included in the Report,—this custom has been discontinued. With regard to the sex, age, and result of those vaccinated during the year about one-third of males were vaccinated in excess of females, and those vaccinated over one year of age, and those under one year of age were about equal in number, and of one thousand five hundred and twenty-six (1,526) vaccinated, one thousand three hundred and thirteen (1,313) were successful, one hundred and twenty-nine (129) unsuccesful, and eighty-four (84) doubtful, the percentage of success being 86· The quality of lymph and vesicles good. Little or no Small-pox prevailed during the year. No known obstruction to the spread of vaccination existed."

[In Table No. 2 for 1857, in the Appendix, the operations performed by the Station Vaccinator at Hyderabad, and by the Civil Hospital Establishment, have been separated. In the Civil Surgeon's Report they seem to be united.]

Shikarpore.—Assistant Surgeons W. G. Hunter and J. Gilbert.—One (1) Vaccinator on Rupees nine (9) per mensem.

Table of Vaccination for five years and average :—

Shikarpore.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		25	1,918	964	1,547	933	1,077
Sex	Males.....	15	1,176	582	806	455	607
	Females.....	10	742	382	741	478	470
Caste..	Hindoos.....	..	507	611	984	608	542
	Mussalmans ..	25	1,401	350	554	320	530
	Christians	..	7	1	7	5	4
	Parsee	..	..	..	..	..	..
	Other Castes ..	..	3	2	2	..	1
Age	Under one year.	..	..	..	..	771	..
	Above one year.	..	..	..	..	162	..
Result.	Successful	25	1,725	838	1,510	932	1,006
	Unsuccessful..	..	146	111	37	1	59
	Doubtful	..	47	15	..	..	12
Percentage of Success		100·0	89·9	86·9	97·6	99.8	94·8

No reports for the years 1856 and 1857 have been received from this Station.

Kurrachee Dispensary.—Sub-Assistant Surgeon Anunta Chundroba.

Table of Vaccination for five years and average :—

KURRACHEE DISPENSARY		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		104	482	112	120	85	181
SEX....	Males.....	66	320	66	74	43	114
	Females.....	38	162	46	46	42	67
CASTE..	Hindoos	93	256	7	38	23	83
	Mussalmans ..	11	222	99	82	43	92
	Christians	..	3	6	..	..	2
	Parsees	..	1	..	..	..	..
	Other Castes..	..	..	..	..	19	4
AGE....	Under one year.	..	..	..	..	34	..
	Above one year.	..	..	..	..	51	..
RESULT.	Successful....	97	438	99	80	28	149
	Unsuccessful..	3	24	6	39	53	25
	Doubtful	4	20	7	1	4	7
Percentage of Success		93·3	90·8	88·3	66·6	32·9	74·4

[NOTE.—In Table No. 2 for 1856 and 1857 in the Appendix—prepared from Superintending Surgeon's Returns—an error has crept in with regard to the Charitable Dispensary, Kurrachee, which has vitiated in a great measure the correctness and utility of the tables. The figures should be corrected as above, which are taken from the Half-yearly Reports of the Sub-Assistant Surgeon. It will be seen therefore that there were one hundred and twenty (120) vaccinations performed in 1856, instead of none as stated in the table, and eighty-five in 1857 in place of 17, erroneously recorded in the table.]

1856.—The Sub-Assistant Surgeon regrets the few vaccinations performed at the Dispensary, but accounts for it by the presence of a Station Vaccinator at Kurrachee. He states :—

"There is some difficulty in inducing parents to have their children vaccinated. None ever came of their own accord, and a kind of compulsion is still found necessary."

1857.—Mr. Anunta Chundroba writes :—

"I am sorry I have no encouraging report to make upon vaccination. During the past twelve months little was done, for want of good matter. I have received several supplies from Bombay, but unfortunately none succeeded." He then states his reasons for fearing the vaccine virus at Kurrachee was not very genuine, especially as he had met with a case of Small-pox following vaccination. He adds, "the difficulty in obtaining children formerly met with, does not exist to so great an extent as before, but the hearty co-operation of the parents is still wanting."

He concludes :—

"It is cheering to see that of the many children I vaccinated during the early part of my stay here, not one—at least as far as I have been able to ascertain—has been attacked with Small-pox."

At the following Stations in Sind no special reports have been

received. The tables are therefore simply given of vaccination for five years and average :—

Jerruck.

Vaccination for five years and average :—

JERRUCK.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		6	77	119	17	261	96
SEX....	Males.....	2	48	72	2	116	48
	Females.....	4	29	47	15	145	48
CASTE..	Hindoos.....	5	23	84	..	33	22
	Mussalmans ..	..	54	71	17	228	74
	Christians	1	..	..	..	..	..
	Parsees	..	..	..	..	..	..
	Other Castes..	..	..	..	..	..	..
AGE....	Under one year.	..	..	..	..	39	..
	Above one year.	..	..	..	..	222	..
RESULT.	Successful....	5	77	89	17	259	89
	Unsuccessful..	1	..	30	..	2	7
	Doubtful	..	..	..	..	..	..
Percentage of Success		83·3	100·0	74·7	100·0	99·2	91·4

Meerpoor.

Vaccination for five years and average :—

MEERPOOR.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		120	1,463	239	45	31	379
SEX....	Males.....	68	857	130	26	16	219
	Females.....	52	606	109	19	15	160
CASTE..	Hindoos.....	33	622	75	18	..	149
	Mussalmans ..	87	841	164	27	31	230
	Christians	..	..	..	..	..	..
	Parsees	..	..	..	..	..	..
	Other Castes..	..	..	..	..	..	..
AGE....	Under one year.	..	..	..	..	2	..
	Above one year.	..	..	..	..	29	..
RESULT.	Successful....	88	1,091	185	14	27	281
	Unsuccessful..	17	131	14	31	2	39
	Doubtful	15	241	40	..	2	59
Percentage of Success		73·3	74·5	77·4	31·1	87·0	68·6

Mahomed Khan's Tanda.

Table of Vaccination for five years and average :—

Mahomed Khan's Tanda.	1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.	13	13	..	125	10	32
Sex .... Males	9	13	..	71	5	19
Sex .... Females	4	..	..	54	5	13
Caste.. Hindoos	1	..	..	44	9	11
Caste.. Mussalmans ..	12	13	..	81	1	21
Caste.. Christians....	..	..	..	..	..	..
Caste.. Parsees	..	..	..	..	..	..
Caste.. Other Castes..	..	..	..	..	..	..
Age .... Under one year.	..	..	..	..	5	..
Age .... Above one year.	..	..	..	..	5	..
Result. Successful....	9	10	..	121	10	30
Result. Unsuccessful..	..	..	..	..	..	..
Result. Doubtful	4	3	..	4	..	2
Percentage of Success	69·2	77·0	..	96·8	100·0	68·6

Larkhana.

Table of Vaccination for five years and average :—

Larkhana.	1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.	344	12	135	..	..	98
Sex .... Males	208	11	89	..	..	62
Sex .... Females.....	136	1	46	..	..	36
Caste.. Hindoos	234	..	49	..	..	57
Caste.. Mussalmans ..	110	12	86	..	..	41
Caste.. Christians	..	..	..	..	..	..
Caste.. Parsees	..	..	..	..	..	..
Caste.. Other Castes..	..	..	..	..	..	..
Age .... Under one year.	..	..	..	..	..	..
Age .... Above one year.	..	..	..	..	..	..
Result. Successful....	256	4	83	..	..	69
Result. Unsuccessful..	63	8	42	..	..	22
Result. Doubtful	25	..	10	..	..	7
Percentage of Success	74·4	33·3	61·4	..	..	33·8

For the operations performed at Roree, Tarosha, and Halla, during 1856 and 1857, reference is made to Table No. 2 in the Appendix. At Kittee there was no vaccination during these years.

Aden.—Assistant Surgeon Steinhaeuser.—One (1) Vaccinator on Rupees fifteen (15) per mensem.

Table of Vaccination for *four* years and average :—

Aden.		1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated		887	825	1,786	901	1,099
Sex	Males	692	646	1,277	714	832
	Females	195	179	509	187	267
Caste	Hindoos	44	43	125	55	67
	Mussalmans	781	767	1,606	80	808
	Christians	3	10	51	40	26
	Parsees	..	..	..	3	1
	Other Castes	59	5	4	723	197
Age	Under one year	..	..	..	41	..
	Above one year	..	..	..	860	..
Result	Successful	866	825	1,786	901	1,094
	Unsuccessful	21	..	..	..	5
	Doubtful	..	..	..	..	..
Percentage of Success		97·6	100·0	100·0	100·0	99·4

1856.—The Civil Surgeon (Mr. Steinhaeuser) reports—

"Vaccination has been well kept up during the year. One thousand seven hundred and eighty-six (1,786) individuals have undergone the operations with success, viz. one thousand two hundred and seventy-seven (1,277) males, and five hundred and nine (509) females. The largest number of cases for vaccination is found among the Somalies, and especially among adults of these tribes. They have a dread of Small-pox, and as marking the body by incision and by burning is an hereditary custom, the three round cicatrices upon the arm produced by the vaccine pustule are in request among them. Arabs, after the Somalies, have brought the largest number of children for vaccination; next the Hindoos, who are prejudiced against vaccination; the Jews have given the least support to the operation,—they form a large proportion of the population of Aden, but are very bigotted and averse to all innovation. The lymph forwarded this year from the Royal Jennerian Society of London was tried in several cases, but proved ineffectual."

1857.—Assistant Surgeon Steinhaeuser reports that—

"Vaccination has been regularly and carefully carried on by the Native Vaccinator under my superintendence during the entire year, but, numerically speaking, with much less success than during the previous year, for nine hundred and one (901) individuals only have been successfully operated on. I am unable to account for this falling off in the numbers vaccinated, as the prevalence of Variola as an epidemic in the town might be supposed to induce the inhabitants to seek the more eagerly for this preventative means.

"The Somalie and Arab population have been the chief applicants, as usual, for vaccination. At one part of the hot season when doubtful of the quality of the lymph, a fresh supply was applied for and received from the Superintendent, Presidency, and also from the Royal Jennerian Institution of London, and several children were successfully operated on with the lymph obtained from these quarters. Since that period the vaccine matter at this station has produced perfectly satisfactory results."

Bushire.—Assistant Surgeon McAlister.

Table of Vaccination for five years and average :—

Bushire.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		95	279	382	115	195	213
Sex	Males.....	41	135	196	59	91	104
	Females.....	54	144	186	56	104	109
Caste..	Hindoos.....	..	..	..	..	..	..
	Mussalmans ..	83	258	358	106	177	196
	Christians	4	11	8	5	18	9
	Parsees	..	..	..	..	..	..
	Other Castes..	8	10	16	4	..	8
Age....	Under one year.	..	..	..	...	133	..
	Above one year.	..	..	..	..	62	..
Result.	Successful....	88	265	380	69	144	189
	Unsuccessful..	7	14	2	45	51	24
	Doubtful	..	..	..	..	..	..
Percentage of Success		92·6	94·9	99·4	60·0	73·8	84·1

1856.—The Civil Surgeon states :—

"From the 1st January to the 2nd May sixty-nine (69) children, including all castes, were vaccinated successfully, and twenty-five (25) unsuccessfully; but after the latter date to the termination of the current year no children were brought to the Dispensary for that purpose, excepting twenty-one (21), who were vaccinated at the latter end of the past month, with the lymph transmitted from Bombay, but not one of the number proved successful. The cause of this lymph producing no effect must be attributed to its having been rendered inert during its long passage to this place in the "Clive," which vessel occupied about forty days from Bombay to Bushire. It is to be regretted that this lymph did not act, particularly as Small-pox has manifested itself in this place during the past month; but as yet only a few children have been attacked by it, nor do I expect that many will suffer from the malady, as the great mass of the children of the town, owing to the war, have been removed to a remote part of the country.

"The cause of parents not bringing their children during the summer months is partly owing to the extreme heat of the weather, and partly to apathy and indifference, which these people exhibit less or more, at all times in this matter. During the very hot weather, however, the vaccine does not propagate a pustule, even when it is transmitted directly from the arm of one child to that of another, and it would, under such circumstances, be useless bringing children out, but parents often decline doing so sometime before the lymph ceases to act. In comparing the number vaccinated last year, viz. one hundred and fifteen (115) with the preceding year, viz. three hundred and eighty-two (382), there is a decrease of two hundred and sixty-seven (267), which is partly owing to the disturbed state of the country and partly to the vaccine having failed."

1857.—There were one hundred and ninety-five (195) vaccinations performed, of which one hundred and forty-four (144) were reported to be successful.

VACCINATION UNDER NATIVE CHIEFS' AGENCY.

26. Upon reference to Table No. 3 in the Appendix, it will be seen, that in 1856 the total number vaccinated amounted to fifty-three thousand six hundred and sixty-three (53,663), an increase of about eight thousand and five hundred (8,500) over the year 1855. In 1857, it will be observed, that the number was forty-four thousand and thirteen (44,013), being a diminution of about nine thousand and six hundred (9,600) from 1856, chiefly in the Southern Division and in Guzerat. In 1856 there was a steady increase in each Division, the continuance of which perhaps could not be expected during the year 1857. A greater falling off may not be unreasonably anticipated during the present year.

27. The average of successful vaccinations for the year 1856 was about 88·0 per cent. In 1857 it reached only a little more than 87·0 per cent. In the Native States of the Southern Division the highest average prevails. The sexes operated upon during the two years are pretty equally balanced, and a remarkable uniformity runs throughout all the Divisions. The Hindoos, as to numbers, far outstrip all other castes. With regard to "age," it appears that there were only thirteen thousand six hundred and thirty (13,630) children *under* one year of age vaccinated, whilst there were upwards of thirty thousand (30,000) *above* that age—a result which shows that in the Native States, as might perhaps be expected,—the value of vaccination in early infancy is little understood or appreciated.

28. The Reports of the several Medical Officers under whom the Native Chiefs' Vaccinators are placed, will now be examined. Reference will occasionally be made to the Superintendents' Reports previously given, where the Native Chiefs' agency may have been already alluded to.

Southern Deccan Division.

29. Jagheers in the Belgaum, Dharwar, Sholapore and Sattara Districts under the Superintendent of the Southern Deccan Division, (Assistant Surgeon Johnstone in 1856, and Assistant Surgeon Mills in 1857,) are comprised in this Division.

Table of Vaccination for five years and average:—

Southern Deccan Division.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		6,299	5,765	7,604	9;806	8,723	7,639
Sex....	Males.....	3,957	3,569	4,126	5,263	4,621	4,307
	Females.....	2,342	2,196	3,478	4,543	4,102	3,332
Caste..	Hindoos	5,776	5,122	7,274	9,438	8,109	7,144
	Mussalmans ..	241	574	328	360	349	370
	Christians	..	..	2	8	..	2
	Parsees	..	..	..	..	..	..
	Other Castes	282	69	..	..	265	123
Age....	Under one year.	..	..	..	..	2,155	..
	Above one year.	..	..	..	..	6,568	..
Result.	Successful....	5,093	4,783	6,481	8,842	8,121	6,664
	Unsuccessful..	264	218	256	154	213	221
	Doubtful	942	764	867	810	389	754
Percentage of Success		80·8	82·9	85·2	90·1	93·1	86·4

1856.—The total number vaccinated by the Jagheers' Vaccinators (12 in number) was nine thousand eight hundred and six (9,806), an increase of two thousand two hundred and two (2,202) over 1855, being at the rate of eight hundred and seventeen (817) operated upon by each Vaccinator. There were five thousand two hundred and sixty-three (5,263) males, and four thousand five hundred and forty-three (4,543) females, all Hindoos, with the exception of three hundred and sixty (360) Mussalmans and eight (8) Christians. The ratio per cent. of successful to number vaccinated was about 90·0. Dr. Johnstone states:—

"The increase in 1856 appears due to the extension of vaccination in the Kolapore State, where, through the instrumentality of the Acting Political Superintendent, the reception of vaccination was urged on the people with a spirit which, at least for 1856, has made the Kolapore vaccination generally to exceed that of other Jagheer lands. With the exception of this State, vaccination in the Jagheers is inferior, generally in point of numbers, to that performed in the Government districts, and this is plainly to be attributed to the want of interest shown by the Jagheerdars on the subject, as well as to the people themselves, who, in entire ignorance of the nature of vaccination, consider it merely a vexatious operation, in which they place no confidence, and which they avoid in every way in their power. The Sattara Jahgeers are all examples of this, and I do not wonder at the feeling of want of confidence, for repeated instances of Small-pox after vaccination (which I truly believe had been with the knowledge of the Vaccinators imperfectly performed) were brought before me during my late visits to the Jagheers."

1857.—Dr. Mills writes:—

"During the year 1857 the number of Vaccinators supported by the Jagheerdars in this Division has increased from twelve (12) to sixteen (16). The Chiefs of Meeruz, Jumkhandee, Moodhal, and Kajwar, in the Southern Muratha Country, having been induced to entertain Vaccinators, and the Koorundwar Chiefs are making arrangements to entertain a second in

addition to one already in their employ. This number may be again diminished in 1858, as the Chief of Kajwar died in October last, and his Jagheer lapsed to the Government, but for the present the Vaccinator is ordered to continue in his duties.

"I regret to say, that notwithstanding the increase in the number of operations, there is a very considerable decrease in the amount of work performed. The numbers being in 1856 nine thousand eight hundred and six (9,806), in 1857 eight thousand seven hundred and twenty-three (8,723,) showing a decrease of one thousand and eighty-three (1,083.) The number of successful cases does not, however, exhibit a proportional diminution. Correcting those of 1856, by deducting four hundred and forty-six for false Returns, the numbers will be for 1856 eight thousand three hundred and ninety-six (8,396), and for 1857 eight thousand one hundred and twenty-one, (8,121), decrease two hundred and seventy-five (275.) The first two of the causes before referred to,* might have been expected to operate equally on the Jagheerdar and Government Establishments; but they should have been more than counteracted by the increased number of operations, and by the fact, that, in those places, where vaccination had been only lately commenced in 1856, another year had elapsed, in which to overcome the prejudices of the people. Of eleven (11) Vaccinators employed in 1856, six (6) have during the past year returned diminished numbers, and the increase shown by the other five is, with one exception, very trifling. The Vaccinator at Kajul (Kolapore), whose work in 1856 was very good, was dismissed in February 1857 on account of his quarrelsome disposition; but his successor is doing very well. The Returns of Ramookund Josee (Bowrah Jagheer, Kolapore,) are the largest made by any Vaccinator in either Establishment, and there is reason to believe that they are trustworthy; the decrease in his number last year is mainly to be attributed to sickness. Ramanoozooloo Soobrow (Garh Julny, Kolapore State,) returns large numbers, and his work, as verified by myself, is excellent. Of the total number vaccinated 53·1 per cent. were males, and 47·0 per cent. females, in 1856 there were 52·9 per cent. males and 46·3 per cent. females—showing very little alteration in this particular. The numbers under one year of age are in the proportion of 24·7 per cent., while those of 1856 were 18·9 per cent.—showing an increase in 1857 of 5·7 per cent. In the result of operations here, as in the Government Establishment, the Returns of 1857 show a marked improvement over those of 1856, the ratio of successful cases being 93·1 per cent. against 85·6 per cent. The condition of the lymph and vesicles is good. Four new Vaccinators have been supplied with lymph, and two who lost theirs, have had it re-established. Small-pox has been reported as more or less prevalent in seven Jagheers, and was epidemic in Akulkote (Sholapore) in February and March; Garh Julny (Kolapore State) and Tekolch (Belgaum) in April; Bhore (Sattara) and Bowrah (Kolapore) in June; Kajul and Gurh Julny (Kolapore) in July and August. No instances of inoculation have been reported during the year.

Western Guzerat Division.

30. The Native States in which Vaccinators are employed under the Superintendent of Vaccination Western Division of Guzerat, are those under the Political Agent in Kattywar, the Mahee Kanta, and Palhunpore. In the sketch before given at p. 18, Dr. Lord has fully described these districts. In 1856 they were all under the same Superintendent; but in 1857 the Kattywar Division was separated from the others, and remains under charge of Dr. Lord, whilst vaccination in the Mahee Kanta and Palhunpore States is presided over by Dr. Thorp.

* See p. 15 Government Vaccination S. D. *ante.*

Table of Vaccination for five years and average :—

Western Guzerat Division.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		6,913	12,008	22,595	30,152	15,289	17,391
Sex....	Males	3,778	6,434	11,796	15,436	8,065	9,102
	Females.....	3,135	5,574	10,799	14,716	7,224	8,289
Caste..	Hindoos.....	5,628	11,051	21,053	27,620	12,625	15,595
	Mussalmans ..	724	826	1,542	2,532	1,264	1,378
	Christians ...	..	..	..	..	..	..
	Parsees	..	..	..	..	..	..
	Other Castes..	561	131	..	..	1,400	418
Age....	Under one year.	..	..	..	..	6,286	..
	Above one year.	..	..	..	..	9,003	..
Result.	Successful ..	5,678	9,979	19,612	26,340	13,565	15,035
	Unsuccesful ..	540	648	917	911	548	713
	Doubtful	695	1,381	2,066	2,901	1,176	1,643
Percentage of Success		82·1	83·1	86·7	87·3	88·7	85·6

1856.—The total number vaccinated was thirty thousand one hundred and fifty-two (30,152,) being an increase of seven thousand five hundred and fifty-seven (7,557) over the year 1855: of this number fifteen thousand four hundred and thirty-six (15,436) were males, and fourteen thousand seven hundred and sixteen (14,716) females; Hindoos numbered upwards of twenty-seven thousand and six hundred (27,600), and Mussalmans about two thousand and five hundred (2,500); there were about twenty-six thousand (26,000) successful cases recorded, giving an average ratio of about 87·3 per cent. Reference may be made to Dr. Lord's Report of Vaccination for 1856 before given at pp. 19 and 23 for an account of his tour through the Native States, and of the progress of vaccination in that year.

Dr. Lord, in a subsequent communication, reports :—

"It is my pleasing duty to bring to the notice of the Medical Board the growing faith among the higher classes of Natives in this Division in the efficacy of the prophylactic, as evidenced by their acceptance of it in their own families."

1857.—The total number vaccinated was fifteen thousand two hundred and eighty-nine, (15,289), a diminution of fourteen thousand eight hundred and sixty-three (14,863) from 1856, owing to the separation of the Kattywar Circle before alluded to.* The males a little exceeded eight thousand (8,000), and the females seven thousand two hundred and twenty (7,220). There were about thirteen thousand and five hundred (13,500) vaccinated with success—nearly 89 per cent. of the total vaccinations performed. With respect to "age"—the numbers under one year were about six thousand and two hundred (6,200), whilst those above one year were nine thousand (9,000).

* See p. 31 *ante*.

Eastern Guzerat Division.

31. The Native States in which Vaccinators are employed under the Superintendent Eastern Division of Guzerat, are those in the Rewa Kanta and Rajpeepla districts—the Baroda territory having been transferred to the Residency Surgeon, Baroda.

Table of Vaccination for five years and average:—

Eastern Guzerat Division.		1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.		2,527	6,072	9,308	6,742	7,756	6,481
Sex	Males	1,445	3,721	5,466	3,726	4,057	3,683
	Females	1,082	2,351	3,842	3,016	3,699	2,798
Caste	Hindoos	2,262	5,375	8,423	6,244	6,978	5,857
	Mussalmans	252	545	884	496	686	572
	Christians	13	5	..	..	2	4
	Parsees	..	..	1	2	16	4
	Other Castes	..	147	..	..	74	44
Age	Under one year.	..	..	..	..	1,799	..
	Above one year.	..	..	..	..	5,957	..
Result.	Successful	1,792	4,926	7,258	5,945	6,326	5,249
	Unsuccessful	327	490	1,037	429	691	595
	Doubtful	408	656	1,013	368	739	637
Percentage of Success		71·0	81·1	77·9	88·1	81·5	79·9

1856.—The total number vaccinated amounted to six thousand seven hundred and forty-two (6,742), being an increase of more than three thousand (3,000) over the year 1855. There was a slight preponderance of the male sex vaccinated, and the bulk of those operated on were Hindoos. The ratio per cent. of successful to total vaccinated was about 88·1. Owing to the Superintendent of Vaccination for this Division (Dr. Peach) proceeding to England on sick certificate at the end of 1856, no report was forwarded, whereby the causes of the increase above noticed might be traced.

1857.—The total number vaccinated was seven thousand seven hundred and thirty-six, (7,736), being an increase of one thousand and fourteen (1,014) over the year 1856: of these nearly six thousand (6,000) were above one year of age, and the remainder below that age. About 81·5 were vaccinated with success. The Superintendent of the Division (Dr. Ross) states:—

"The Annual Return of Vaccinations performed by Vaccinators employed by the Native Chiefs in the Rewa Kanta and Rajpeepla States, shows that the work, notwithstanding the disturbing causes present in 1857, is steadily increasing."

NORTHERN DECCAN DIVISION.

32. The Native State at "Peint" entertains one Vaccinator under the Civil Surgeon at Nassick.

Table of Vaccination for *four* years and average :—

NORTH DECCAN DIVISION. (Peint—Nassick).		1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated		30	890	325	305	381
SEX	Males	17	439	169	138	196
	Females	13	451	156	167	193
CASTE	Hindoos	15	890	325	305	384
	Mussalmans	15	..	..	..	
	Christians	..	..	..	..	..
	Parsees	..	..	..	..	..
	Other Castes	..	..	..	..	..
AGE	Under one year	..	..	..	37	..
	Above one year	..	..	..	268	..
RESULT	Successful	19	776	247	253	324
	Unsuccessful	1	47	33	17	24
	Doubtful	10	67	45	35	39
Percentage of Success		63·3	87·2	76·0	83·0	77·4

1856.—The total number vaccinated was three hundred and twenty-five (325), a diminution of five hundred and sixty-five (565) from the previous year, which the late Civil Surgeon Dr. Pelly ascribes to the sickness of the Vaccinator and to the general unhealthiness of the climate.

1857.—The total number vaccinated was three hundred and five (305), a little less than the previous year, although there were disturbing causes at Peint during the latter half of 1857. Only thirty-seven (37) children under one year of age were vaccinated, whilst those above that age numbered two hundred and sixty-eight (268).

SOUTHERN DECCAN DIVISION.

33. Vaccination in the Native State of Sawunt Warree, under the care of the Sub-Assistant Surgeon, is alone included in these Returns. The work is performed by one Vaccinator.

Table of Vaccination for five years and average :—

Sawunt Warree.	1853.	1854.	1855.	1856.	1857.	Average.
Total Number Vaccinated.	4,247	6,663	4,675	6,638	6,102	5,665
Sex.... Males.....	2,190	3,305	2,337	3,271	3,073	2,835
Females.....	2,057	3,358	2,338	3,367	3,029	2,830
Caste.. Hindoos.....	3,919	6,406	4,295	6,460	5,844	5,385
Mussalmans ..	221	138	293	91	142	177
Christians....	107	119	87	87	116	103
Parsees	..	..	..	..	..	..
Other Castes..	..	..	..	..	..	..
Age.... Under one year.	..	..	..	..	811	..
Above one year.	..	..	..	..	5,291	..
Result. Successful....	3,879	6,251	4,186	5,919	5,000	5,047
Unsuccessful..	355	361	323	436	664	428
Doubtful	13	51	166	283	438	190
Percentage of Success....	91·3	93·8	89·5	89·1	81·9	89·1

1856.—The total number vaccinated was six thousand six hundred and thirty-eight (6,638), an increase of nearly two thousand (2,000) over the year 1855: of this number nearly six thousand (6,000) were vaccinated with success, or nearly 90 per cent. The majority were Hindoos, and of the sexes a nearly equal number of each were vaccinated.

Mr. Sub-Assistant Surgeon Spencer writes :—

"The Native Vaccinator and his peon have prosecuted their work with good result during the past year, notwithstanding the difficulties which opposed the onward and steady progress of vaccination in July last in one of the districts, and which was brought to notice in August following; since then no difficulty was experienced by the Vaccinator. Small-pox has prevailed in the Warree State, but not to any great extent, as only thirty-four (34) persons were affected during the year, of these seven (7) died. The increase in the number of persons vaccinated is chiefly to be attributed to the presence of Small-pox in the country, as the people now come voluntarily to get the operation done, which was not the case before."

1857.—Assistant Surgeon Kearney states :—

"The number vaccinated during the year 1857 has been six thousand one hundred and two (6,102), or five hundred and thirty-six (536) less than in 1856."

The diminution is said to be due to the prevalence of cholera, fever, bowel complaints and measles, in the districts, to the severity of the rains, and to the illness of the Assistant. Dr. Kearney however trusts that the progress of vaccination will not again decline, but continue to show the same satisfactory results that have been maintained since the Establishment was first formed in 1854. He says :—

"It is gratifying to report that during the last fourteen years sixty-eight thousand two hundred and forty-six (68,246) persons have been vaccinated in this Agency, making a yearly average of four thousand eight hundred and seventy-four (4,874).

He adds respecting the year 1857:—

"The condition of the lymph and vesicles has been uniformly good. No Small-pox prevailed in the town of Warree, but it appeared in five villages in the district. The practice of inoculation has long since ceased, and is strictly forbidden. No obstruction whatever exists to the spread of vaccination; the people are perfectly willing to have their children vaccinated."

Dr. Kearney proposes to employ as additional Vaccinators two peons who have been brought up in the Department—a measure, unattended with expense and approved by the Political Superintendent.

KATTYWAR DIVISION.

34. Sixteen Vaccinators are entertained by the Native Chiefs under the superintendence of Dr. Lord, Civil Surgeon at Rajkote, and Superintendent of Vaccination in Kattywar.

In 1857 there were five thousand eight hundred and thirty-eight (5,838) vaccinations recorded, of which five thousand one hundred and sixty-four, (5,164) or about 88·4 were successful. There were three thousand and thirty-six (3,036) of the male, and two thousand eight hundred and two (2,802) of the female sex vaccinated. Hindoos numbered five thousand one hundred and seventy (5,170), Mussalmans six hundred and nineteen (619), and other castes forty-nine (49). There were three thousand two hundred and ninety-six (3,296) children vaccinated *above* one year of age, and two thousand five hundred and forty-two (2,542) *below* that age.

35. For further particulars relative to this Division, reference may be made to the Reports of the Superintendent before given at pp. 32—34.

[ERRATUM.—*Mahableshwur.* At page 44 *ante* it was stated that no vaccinations had been reported in 1857 at this station, because at the time those sheets passed the press the Annual Report had not been transmitted. It has since been received,—and it is found that there were two hundred and fourteen (214) vaccinations performed in 1857: of these one hundred and twenty-four (124) were males, and ninety (90) females; one hundred and eighty (180) were Hindoos, twenty-one (21) Mussalmans, nine (9) were Christians, and four (4) Parsees; sixty (60) were under, and one hundred and fifty-four (154) above one year of age; one hundred and seventy-six (176) were vaccinated with success, and thirty-eight (38) failed; the percentage of success being 82·2. The table at page 44 and those in the Appendixes should therefore be corrected as above.

The Superintendent, Dr. Maitland, states:—

"The number of persons vaccinated during the past year is considerably in excess of the preceding years. This must be attributed to the exertions of my predecessor Dr. Winchester, whose zeal in the cause of vaccination is well known."]

MISCELLANEOUS REMARKS.

36. The Director-General has now brought to a conclusion the sketch of vaccination proceedings in 1856 and 1857, commenced at page 4 *ante;* but before closing the Report, he is desirous of recording some circumstances which have occurred during these two years, and then of submitting a brief analysis of the tables in Appendix No. 2 relating to the years 1853 to 1857.

Increase of Pay to Vaccinators in Sind.

37. With reference to para. 11 p. 4 of the present Report, it should be added that the Government of India, by letter No. 1549, of 28th November 1856, confirmed the sanction of this Government to the grant of travelling batta of three annas per diem to each member of the Subordinate Vaccination Establishment under the Superintendent of Vaccination in Sind, and to the allowance of Rs. 100 hitherto granted for the conveyance of children with lymph from village to village being fixed at Rs. 150 for the future.

Dr. Broughton's paper on Vaccination before alluded to at p. 42.

38. In August 1856 Mr. Broughton, Civil Surgeon, Kolapore, submitted to the late Medical Board a Tract on Vaccination and Small-pox, drawn up in concise and familiar terms, and well adapted for translation into the Vernacular languages. Under Government Resolution No. 3301, of 14th November 1856, the paper was translated into Hindoostanee, Murathee, Guzerathee, and Canarese, by the Oriental Translator to Government, and into Sindee by a Sindian Moonshee, and between twelve and thirteen thousand copies freely distributed amongst all classes of the community. Mr. Broughton's paper was subsequently brought to the notice of the Honorable Court of Directors, who expressed themselves, in October 1857, as "very desirous that all available means should be taken to ensure the appreciation of the benefits conferred by vaccination by the dissemination amongst the people of information on the subject in a popular form."

Indirect aids to Vaccination.

39. In para. 104 p. 24 of the Vaccination Report for 1855, the late Medical Board suggested that some indirect means of compulsory vaccination might perhaps be advisable, such as by making it essential that all persons seeking Government employment, and all children admitted into Government schools, should have been previously vaccinated. The subject was referred by the Government of India for the consideration of the Honorable Court of Directors, who, in para. No. 66, of their

Despatch No. 123, of December 1856, state, that "they do not think that any authoritative rule on the subject should be promulgated," and concur in the opinion of the Government of India "in the inexpediency of passing any rule for rendering vaccination an indispensable condition of obtaining Government employment."

Compulsory Vaccination in Sind.

40. With reference to the 33rd para. p. 12 of the Medical Board's Report on Vaccination in 1855, regarding the forcible vaccination of adults in Sind by the late Superintendent, the Honorable Court of Directors, by their Despatch No. 53, of 6th October 1857, express themselves as follows:—

(18) Misconduct of the Superintendent of Vaccination in Sind, in having forcibly vaccinated certain inhabitants of Kurrachee.

Para. 12. "Dr. ———'s conduct first attracted the attention of the Medical Board by the circumstances connected with his having forcibly vaccinated a Purvoe in the service of Government, for which offence he was fined Rs. 50 by the Magistrate of Kurrachee; and from the investigations pursued by the Board, it would seem that the system pursued by him was to 'perambulate the streets and roads with the Foujdar, and tell every man they met that he must then and there be vaccinated, no objections being allowed to be of any avail.' He was then charged with forcibly entering houses and vaccinating 'not only children but men of 50 or 60 years of age.' Dr. ——— denied having used any violence, but he appears to admit that he vaccinated persons who were disinclined to the operation, and it is clear that the effect of his indiscreet conduct was to raise up a determined spirit of resistance amongst the inhabitants of Kurrachee and Hyderabad, and, for a time at least, to put an end to all vaccination operations at the former place. Notwithstanding the representations made by the Officiating Commissioner as to the benevolent motives by which Dr. ——— had been actuated, we are surprised at your having abstained from ordering his immediate withdrawal from Sind. You will communicate to Dr. ——— our strong displeasure at his extreme indiscretion, and the opinion which we feel it our duty to express on this subject; and you will let it be known throughout our Medical Department, that we shall not hesitate to remove from our Service any of our servants who may hereafter manifest such utter disregard of the feelings of the people, and of the deplorable consequences that ensue to the State from such indiscretion."

41. In para. 87 of their Despatch, 14th July 1857, the Honorable Court state on the subject of compulsory vaccination generally:—"It is most desirable that the feelings of the people should as far as possible

be conciliated in the measures taken by our officers, either for the prevention of inoculation, or for the spread of vaccination. We trust that while no doubt is suffered to exist as to the wishes of your Government, and while due support is given to the Vaccinators, it will be borne in mind that measures of a compulsory character are not permitted, for the purpose of extending the practice of vaccination."

Suppression of Inoculation by legal Enactments.

42. In August 1856 the late Medical Board brought to the notice of Government that inoculation was practised in the Concan (*see* p. 8 *ante*), and that the checks upon it seemed to be ineffectual so long as the Law confers no authority to enforce its suppression. In September 1856 Government applied to the Remembrancer of Legal Affairs for his opinion as to "how far the present state of the law will justify interference to put a stop to the barbarous practice of inoculation throughout the Mofussil." In April 1857 Government, by letter No. 875, informed the late Medical Board that "the practice of inoculation is not prohibited by law in India, and that the Right Honorable the Governor in Council is unable to authorise the adoption of any forcible measures by the local authorities with the view of suppressing it, and that so late as 1853 the Government of India deemed a prohibitory enactment inexpedient."

Quality of Lymph employed in July 1857.

43. In para. 67 of Honorable Court's Despatch No. 123, of December 1856, to the Government of India, it is stated:—"We take this opportunity of recalling your attention to a subject which has frequently been under your consideration, and which is of great importance with reference to the spread of vaccination in India. We allude to the quality of the vaccine lymph supplied to the Vaccinators in the Mofussil. We are aware that in the North-West Provinces measures are in progress for securing a constant supply of good lymph; but we are desirous that the best mode of avoiding the discouragement to the practice of vaccination which must inevitably result from the extensive failure of the lymph employed should engage special consideration with reference to all parts of India."

Same Subject.

44. On this reference the late Medical Board called for Reports from Superintendents of Vaccination, dated 1st July 1857, with respect to the condition of the lymph during the last six months, and then in use by each Vaccinator, with date of last renewal.

The following is a summary of the Reports:—The lymph during the last six months was reported every where to have been good, except under two Native Vaccinators in the Concan, where it had deterio-

rated from the employment of vaccine matter of the ninth and tenth days, but had been renewed by fresh lymph from neighbouring Vaccinators; and in Sind, where a Vaccinator was using imperfect lymph, but which had been replaced by excellent matter. The present condition and date of last renewal were as follows:—

Presidency Division.....	"Good."	Renewed in 1855.
Concan do.	"Correct."	Renewed in 1855.
Northern Deccan.....	"Healthy and good."	Renewed in 1849.
Southern do.	"Pure and efficient."	Never renewed.
Eastern Guzerat	"Good."	Does not require renewal.
Western do.	"Good."	Do. do.
Sind.....	"Good."	Do. do.

It was stated by the Board, that the general good quality of lymph supplied to the Vaccinators in the Mofussil is fully established. Nevertheless, it would appear desirable that there should be a constant stock of good lymph kept up by periodical supplies from England.

New Registers and Forms introduced.

45. In September 1857, Government approved of certain new Forms and Registers of Vaccination submitted by the late Medical Board, which were consequently introduced into the Department from the 1st October 1857. Consequent thereon the following alterations were made in Section VIII. of the Regulations.

VACCINATION RETURNS.

Art. 39. A Monthly Register of Vaccination, according to Form V 1, is to be kept by each Native Vaccinator, in the Vernacular language, and copy forwarded to the Superintendent, along with the attestation of the correctness of the Register obtained from the Headman of the Village (Form V 2).

40. Superintendents, after having satisfied themselves of the correctness of the Registers, will frame from them two (2) Returns, Form V 3 for the Collector of the District, and Form V 4 (in duplicate) for the Superintending Surgeon of the Division.

41. Civil Surgeons will frame a Monthly Return in duplicate, according to Form V. 5, of the work performed by the Station Vaccinator, and forward one copy to the Collector and the other to the Superintending Surgeon.

42. Superintending Surgeons will, from Forms V 4 and V 5, frame a Monthly Return of Vaccination in their Divisions (Form V 6), and forward it to the Medical Board, along with one copy of Form V 4.

43. In framing the Annual Returns (from the 1st January to 31st December of each year), Superintendents of Vaccination, Civil Surgeons, and Superintending Surgeons will employ Forms V 4, V 5, and V 6 for the purpose, adapting them as may be required, to show the totals of the previous twelve Monthly Returns, and contrasting the totals of number vaccinated (arranged according to Sex, Caste, Age, and Result) with those of the previous year.

44. Superintendents of Vaccination and Civil Surgeons will make an Annual Report on the progress of Vaccination, to be submitted to Superintending Surgeons, not later than 15th February in each year.

45. This Report should embrace the following points, and in the order given :—

1. The comparative numbers vaccinated in the past and previous year, with remarks on the increase or the decrease.
2. The comparative numbers vaccinated by each Vaccinator, with explanation of any marked difference.
3. Observations with regard to the Sex, Age, and Result of those vaccinated, and percentage of success.
4. Remarks upon the condition of the Lymph and Vesicles.
5. The prevalence of Small-pox; and whether inoculation or other obstruction to the spread of Vaccination exist; their nature, and the means recommended for their removal.
6. Suggestions for the more effectual spread of Vaccination.
7. Resumé of the monthly tours of the Superintendent, and of the special subjects which have engaged his attention.

46. (As it stands.)

47. Half-yearly Returns of Establishment, according to the accompanying Form, are to be forwarded in duplicate by Superintendents and Civil Surgeons to Superintending Surgeons, one copy of which is intended for the Medical Board.

48. Superintending Surgeons will frame, from the Annual Returns of Superintendents of Vaccination and Civil Surgeons, according to Forms V 4, V 5, and V 6, a General Return of Vaccination in their Divisions, agreeably to those forms, and make a report on the state and progress of Vaccination within their circle.

49. The Medical Board will, from the Annual Returns and Reports furnished them by Superintending Surgeons, Superintendents of Vaccination, and Civil Surgeons, frame a General Report for the whole Presidency, to be submitted to Government and the Honorable Court of Directors.

50. Indents are to be preferred by Superintendents and Civil Surgeons on the Secretary to the Medical Board, countersigned by Superintending Surgeons, for supplies of Forms V 1, V 2, V 3, V 4, and V 5, (the two former being lithographed, and the others printed,) and no alteration is to be made in the Forms without the sanction of the Medical Board.

51. The Medical Stores at the Presidency is the only Depôt for the Forms, and from thence they will be issued to indenting Officers.

52. A small indent for Medicines and requisites for Vaccinators is to be preferred on the Medical Depôts annually, on 15th August, according to Form No. 9, page 211, Medical Code.

N. B.—With reference to Section VIII., Appendix Forms No. I. and No. II. alluded to in Arts. 11 and 12, will not in future be kept lithographed, but must be written. Appendix Forms No. III. and No. VI. are cancelled, and V 2 (as being referred to in Arts. 22 and 25) substituted. Art. 23 and Appendix Form No. IV. are cancelled.

New Forms of Returns.

46. These Returns as now prepared and forwarded are much more simple than those previously in use, and are found to embrace nearly every important particular. The objection stated at page 45 *ante*, by Dr. Morehead, Acting Superintending Surgeon Poona, that "the total number vaccinated" (including therein entries made of doubtful and unsuccessful cases, which are re-vaccinated) "expresses an excess over the total individuals *i. e.* members of community vaccinated" is undoubtedly correct; but it did not appear to the late Medical Board of very great importance to distinguish between those who were vaccinated for the first, and those who

were vaccinated for the second time,—as in each instance an operation was performed, the result of which it appeared desirable to record. To the course suggested by Dr. Morehead in the same paragraph, viz. that it would be better to record only successful cases of vaccination, and thus get rid of the present "cumbrous system," there is the serious objection that neither the Superintendent of Vaccination, the Superintending Surgeon, nor the Director-General, would be able to form any opinion of the comparative quality of the lymph employed in different districts by different Vaccinators, nor of the care and attention (or the reverse) with which the Native Vaccinators performed the operation. Supervision under this system could scarcely be exercised, and reliance would have to be placed entirely on the statement of the Vaccinator that he had vaccinated successfully a certain number of individuals. But under the present system, if any great discrepancy between the total number vaccinated, and the proportion of success is observed, in a particular district, the Superintendent's attention is immediately attracted to the circumstance, and if his inquiries fail to elicit a satisfactory explanation, it is his duty to visit the district to ascertain by personal investigation the cause of the failure or want of success.

47. The subject of "Age" first engaged attention in 1856, consequent upon Government Resolution on the Report of Vaccination for 1854-55 (see p. 57 Vaccination Report of that year), and columns were opened in all the Returns from 1857 to distinguish between those who were operated upon *under* and *above* one year of age—the object being to contrast the difference between infant and adult vaccination.

Columns for Ages first opened in 1857.

48. The last table in Appendix No. 2 will be found to exhibit the result of this inquiry for the year 1857, and it will be seen that out of a total of two hundred and forty-six thousand six hundred and nineteen (246,619) persons vaccinated, seventy-five thousand one hundred and fifty-five (75,155) were under one year of age, and one hundred and seventy-one thousand four hundred and sixty-four (171,464) above, being an excess of ninety-six thousand three hundred and nine (96,309) in favor of the latter, *i. e.* in other words out of every hundred (100) individuals vaccinated about seventy (70) were *above* one year old, and thirty (30) were *below* that age.

Table of Age in Appendix.

49. In the *Superintendents' Establishments* out of a total of one hundred and seventy-four thousand three hundred and sixty-eight (174,368) operations, fifty thousand nine hundred and eighteen (50,918) were performed upon

Same subject.

children under one year, and one hundred and twenty-three thousand four hundred and fifty (123,450) above one year, being an excess of seventy-two thousand five hundred and thirty-two (72,532) of the latter, *i. e.* in the proportion of about twenty-nine (29) under one year, and seventy-one (71) above that age in every one hundred. (100) individuals. In the *Civil Surgeons' Establishments* there were out of a total of twenty-eight thousand two hundred and thirty-eight (28,238) operations, ten thousand six hundred and seven (10,607) under one year, and seventeen thousand six hundred and thirty-one (17,631) above one year, the excess of the latter being only seven thousand and twenty-four, (7,024), and the proportion out of every hundred being thirty-seven (37) under one year, and sixty-three (63) above that age. *In the Native Chiefs' Agency*, out of a total of forty-four thousand and thirteen (44,013) vaccinations, thirteen thousand six hundred and thirty (13,630) were in infants below one year, and thirty thousand three hundred and eighty-three (30,383) in persons above, being an excess of the latter of sixteen thousand seven hundred and fifty-three (16,753), showing that amongst one hundred (100) individuals operated upon, thirty (30) only were under one year, and seventy (70) above that age. Notwithstanding the above remarkable facts, it will be seen that in two of the Superintendents' Divisions (Presidency and Western Guzerat), and at the following Stations (Bandora, Nassick, Dhoolia, Broach, Kurrachee, Hydrabad, Shikarpore, Roree, and Bushire), the vaccinations performed upon children *under* one year old were absolutely in *excess* of those above that age.

Presumed causes of Vaccination being performed at different Ages.

50. It is difficult to trace the true causes of these differences, and it is impossible to say whether at the Presidency, in Western Guzerat, and at the other places just mentioned, the people are or are not more alive to the value of infant over adult vaccination, than at other places, or whether there may not be accidental circumstances attending the registrations of ages during the first year of its introduction, which may not be met with afterwards. The inference drawn by the Acting Superintending Surgeon, Poona, (Dr. Morehead,) at p. 45 *ante*, which is recorded also in somewhat similar terms in other reports, that the excess of adult over infant vaccination "*proves that notwithstanding the efforts of half a century, this prophylactic has not secured an appreciable hold on the affections of the people*," may be correct; but as it is impossible to be certain without some further information that the greater part of those vaccinated above one year were not really children under two—or at the most three years of age, no safe or satisfactory conclusion can at the present stage be arrived at, further than—that at a very tender age the

majority of Native parents object to the operation of vaccination being performed on their children.

51. The distinction of "infants," "children," and "adults" might, perhaps, hereafter be advantageously introduced into the tables; but for some time to come the present arrangement should be allowed to continue.

Pensions for the Superannuated.

52. There is scarcely a Superintendent during the two years now passed under review, who has not recommended that superannuated Native Vaccinators should receive a small pension, and there is some reason to fear that aged men—unfit for work—are sometimes kept on the Establishment to the prejudice of the cause of vaccination, and to the disadvantage of the public, because Superintendents and others can hardly bring themselves to recommend for summary discharge men who have spent thirty or forty years in the service of Government, and who have no pittance from the State to support them in old age. I earnestly trust that ere long the subject will receive the attention of Government; in the mean time I beg to refer to the remarks on this head in the last para. of Dr. Morehead's Report at page 45 *ante*, with which I fully agree.

53. Analysis of Tables in Appendix No. 2.—*Table No. 1A. Vaccination under Superintendents*—Showing the total number vaccinated in each year from 1853 to 1857, arranged according to sex, caste, age, and result, with averages.

In the year 1853 the Vaccination Establishments under Superintendents were largely increased, and a new Superintendent of the Southern Deccan Division was appointed. The effect of this change is seen in a large increase of the numbers vaccinated in 1854 compared to 1853. The average number of persons vaccinated for the five years appears to be about one hundred and fifty-eight thousand five hundred and sixty-two (158,562) per annum. There seems to be annually vaccinated on an average about seventeen thousand (17,000) more males than females. The proportion per cent. as regards caste is as follows:—Hindoos 80·4, Mussulmans 16·6, Christians 0·9, Parsees 0·1, other castes 1·8. The average percentage of success appears to be very nearly 90·, that is—out of every ten persons operated on, nine are successfully vaccinated.

Table No. 1B is similar to No. 1A, but arranged in accordance with Superintendents' Divisions. In this table the amount of work performed by each Superintendent for the last five years is seen at a glance, and the averages of totals, sexes, castes, ages, and results are distinctly figured.

Table No. 2A. Vaccination under Civil Surgeons, &c.—Showing the total number vaccinated in each year from 1853 to 1857, arranged according to sex, caste, age, and result, with averages. There is nothing in this table to call for particular remark. The largest number of vaccinations were performed in 1853, and are to be explained by the fact that in 1853 the organization of the Establishment belonging to the new Divisional Superintendent of the Southern Deccan Division had not been entirely completed, and that consequently the numbers vaccinated under Civil Surgeons were not affected until the following year 1854, when there was an increase of more than twenty thousand (20,000) under the Superintendent (see Table No. 1B Southern Division), and a decrease of six thousand (6,000) at Belgaum, ten thousand (10,000) at Dharwar, two thousand (2,000) at Kolapore (see Table No. 2B Southern Division). The average number of persons vaccinated by Civil Surgeons appears to be about thirty-six thousand six hundred and sixty-five (36,665) per annum, and about five thousand (5,000) more of the male than of the female sex. The proportion per centum of caste is as follows:—Hindoos 74·7, Mussalmans 22·4, Christians 1·5, Parsees 0·3, and other castes 1·0. The percentage of success on an average of five years is not quite so great as under Superintendents, but the difference is scarcely appreciable.

Table No. 2B is similar to No. 2A, but arranged under Stations classified in accordance with Superintending Surgeons' Divisions, and the details respecting each Station for the last five years are given.

Table No. 2C and 2D are intended to show the number vaccinated at Stations where there is, and where there is *not*, a Native Vaccinator. The former table relates to twenty stations, and shows that, on an average, each Vaccinator operates annually on about one thousand and five hundred (1,500) individuals, the latter table to fifteen places, at each of which about two hundred and ninety (290) persons are annually vaccinated. These tables are scarcely to be relied on, inasmuch as some Civil Surgeons have erroneously included vaccinations performed by other persons than by Station Vaccinators. This is particularly seen at p. 40 *ante*, where the Station Vaccinators' operations are only seven hundred and forty-nine (749); yet one thousand one hundred and twelve (1,112) persons are entered as vaccinated by the Civil Surgeon Ahmednuggur. Moreover at Bhooj, in 1856, operations performed by the Vaccinators employed by His Highness the Rao of Cutch are entered under the Station of Bhooj.

Table No. 3A. Vaccination under Native Chiefs' Agency—Showing

the total number vaccinated each year from 1853 to 1857, arranged according to sex, age, caste, and result, with averages.

In this table it will be observed that the largest number of vaccinations are in 1856, and the smallest number in 1853. The average appears to be about thirty-eight thousand six hundred and fifty-four (38,654 per annum. The distribution into caste shows the average per centum to be—Hindoos 91·3, Mussalmans 6·7, Christians 0·2, Parsees 0·01, and other castes 1·5. The percentage of success is not so high as in other tables, being a little more than 86·0, *i. e.* about eight and a half (8½) persons are successfully vaccinated out of every ten (10) persons.

Table No. 3*B* is the same as Table No. 3A, but the operations for the last five years are arranged according to Divisions.

Table No. 4*A General Abstract of Vaccination for Five Years from* 1853 *to* 1857 corresponds with Table No. 4 of the Appendix, arranged according to sex, caste, age, and result with averages. The total number vaccinated by all the Establishments, throughout the whole Presidency for five years is one million one hundred and sixty-nine thousand, four hundred and ten (1,169,410), or about on an average two hundred and thirty-three thousand eight hundred and eighty-two (233,882) persons per annum. The total number of the male sex is six hundred and forty-seven thousand one hundred and twenty-one (647,121), and of the female sex five hundred and twenty-two thousand two hundred and eighty-nine (522,289), or one hundred and twenty-four thousand eight hundred and thirty-two (124,832) less than males. Thus upon an average there seems to be twenty-five thousand (25,000) more of males than females annually vaccinated. In the year 1855 the largest number of vaccinations were recorded, in the year 1853 the smallest. Vaccinations, therefore, it will be seen, increased from 1853 to 1855, since which time they have diminished in actual numbers, although the percentage of success has been greater. With respect to "caste," the following is the proportion per centum: Hindoos 81·3, Mussalmans 15·9, Christians 0·9, Parsees 0·2, and other castes 1·6.

Table No. 4*B* shows the total number of persons vaccinated, arranged under the head of Establishments under *Superintendents, Civil Surgeons, and Native Chiefs' Agency.* The total number vaccinated, viz. one million one hundred and sixty-nine thousand four hundred and ten (1,169,410), gives an average of about three hundred and eighty-nine thousand eight hundred and three (389,803) for each Establishment; but it will be seen that under Superintendents of Vaccination seven hundred and ninety-three thousand eight hundred and twelve (793,812) operations were performed, nineteen thousand three hundred and

twenty-seven (19,327) by the agency of Native Chiefs, and one hundred and eighty-three thousand three hundred and twenty-six (183,326) by Civil Surgeons and others. With respect to the ratio of success which has attended these operations, that under Superintendents and Civil Surgeons, for five years is nearly 90 per cent., whilst under the Establishment of Chiefs it is about 86 per cent.

I have the honour to be

Sir,

Your most obedient Servant,

B. P. ROOKE, M.D., Director-General,
Medical Department.

Bombay, Director-General's Office,
9th October 1858.

No. 2756 of 1858.

General Department.

To the DIRECTOR-GENERAL MEDICAL DEPARTMENT.

Sir,—I have received and laid before the Right Honorable the Governor in Council your Report on Vaccination throughout the Bombay Presidency and Sind, for the years 1856 and 1857, and am directed to communicate to you the following observations and instructions.

2. His Lordship in Council considers that your Report is a very complete and valuable document, and I am to convey to you the expression of the satisfaction of Government with the great care and attention which has been bestowed upon it.

3. It is to be regretted that the Vaccination Department does not hold out sufficient inducement to enable Government to secure the services of a more trustworthy and intelligent class as Native Vaccinators. The low rate of remuneration, and exclusion from pensions, is, no doubt, sufficient to explain this circumstance in some measure, but His Lordship in Council observes, that "many Vaccinators are employed in occupations foreign to the object for which they were originally intended," and that an objectionable system of allowing absentees to

appoint their own substitutes is tolerated, to the prejudice of the public service. These are both abuses which the Superintendents should, in the opinion of His Lordship in Council, be directed at once to remedy.

4. Government observe with regret, that, notwithstanding the continued zealous efforts of the officers of the Department to extend the practice of Vaccination throughout the country, there is not only no increase of the numbers vaccinated, but the general result shows a retrogression, both in 1856 and 1857, from the numbers vaccinated in 1855; in the former year the falling off is twelve thousand one hundred and thirty-seven (12,137), in the latter no less than thirteen thousand one hundred and forty-seven (13,147). This shows, in the absence of any special explanation, that Vaccination does not advance in popular favour with the Natives of this country. Sind, however, presents a striking contrast in this respect, the increase in that province has been upwards of twenty-five thousand (25,000), as this increase is included in the general results, the falling off in the older provinces of this Presidency assumes very serious proportions for the year 1857, and must be set down, as compared with the year 1855, at not much under forty thousand (40,000). His Lordship in Council trusts, that this may prove to be only a temporary retrogression, and that future experience may tend to dissipate the doubts to which it is calculated to give rise, as to the voluntary adoption at some future period of Vaccination by the Natives of this country as a general practice.

5. In conclusion, I am desired to request, that printed copies of the Vaccination Report for 1856 and 1857 be distributed as usual for general information, and a sufficient number of copies (sixty) furnished to Government for transmission to the Home Authorities.

I have the honour to be, &c.

H. YOUNG,
Chief Secretary to Government.

Bombay Castle, 12*th November* 1858.

APPENDIX.

TABLE

VACCINATION UNDER

Table of Divisional Vaccination, showing the Number and Names of the Divisions, and their compared with those of last Year; the Total Number arranged according to Sex, Caste, Operations performed by each Vaccinator; the Pay of Vaccinators; and the

Number.	Divisions.	Names of the Medical Officers, Superintendents of Vaccination.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.			Sex.	
					1855.	Increase.	Decrease.	Males.	Females.
	1856.								
1	Presidency.....	Asst. Surg. G. R. Ballingall ..	10	7,183	8,494	..	1,311	4,355	2,828
2	Konkan.....	„ T. B. Beatty	18	33,798	35,955	..	2,157	17,389	16,409
3	Northern Deccan ..	„ W. Davey	18	22,614	26,490	..	3,876	12,040	10,574
4	Southern Deccan ..	„ T. B. Johnstone ..	18	16,262	16,208	54	..	8,656	7,606
5	Western Guzerat ..	„ R. G. Lord, M.D.	23	36,567	45,156	..	8,589	19,373	17,194
6	Eastern Guzerat ..	„ W. Peach, M.D...	17	26,260	23,277	2,983	..	14,772	11,488
7	Sind	„ T. E. P. Martin ..	15	15,551	20,809	..	2,258	9,265	6,286
		Total....	119	158,235	176,389	....	18,154	85,850	72,385
	1857.				1856.				
1	Presidency	Asst. Surg. G. R. Ballingall ..	10	6,747	7,183	..	436	4,169	2,578
2	Konkan.....	„ T. B. Beatty.....	18	33,756	33,798	..	42	17,346	16,410
3	Northern Deccan ..	„ W. Davey.....	18	20,563	22,614	..	2,051	10,549	10,014
4	Southern Deccan ..	„ J. Mills.....	18	15,532	16,262	..	730	8,090	7,442
5	Western Guzerat ..	„ R. Thorp	15	28,857	36,567	..	7,710	15,270	13,587
6	Eastern Guzerat ..	„ C. Ross.....	17	25,563	26,260	..	697	14,586	10,977
7	Sind	„ T. E. P. Martin ..	15	40,777	15,551	25,226	..	25,577	15,200
8	Kattywar Circle ..	„ R. G. Lord, M.D..	8	2,573	..	..	..	1,402	1,171
		Total....	119	174,368	158,235	16,133	..	96,989	77,379

Note.—By Government Notification, dated 14th October 1857, eight Vaccinators

No. 1 (For 1856-57).

Superintendents.

Superintendents; the Number of Vaccinators employed; the Total Vaccinations performed, and Age and Result; the Ratio of Successful to Total Vaccinated; the Average Number of Average Cost of every Hundred Persons Vaccinated, for the Years 1856 *and* 1857.

Total Number Vaccinated, arranged according to										Ratio per Cent. of Successful to Number Vaccinated.	Average Number of Persons Vaccinated by each Vaccinator.	Pay of Native Vaccinators.	Average Cost of every 100 Persons Vaccinated, exclusive of the Superintends' Pay & Allowances.
Caste.					Age.		Result.						
Hindoos.	Musulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful.	Doubtful.				
												Rs.	*Rs. a. p.*
4,072	1,042	1,049	120	..	..	..	6,424	..	759	89·4	718	1,608	22 6 2
32,111	817	820	31	19	..	..	32,255	686	857	95·4	1,877	2,784	8 3 9
21,920	689	5	..	..	..	..	21,674	177	763	95·8	1,256	2,784	12 4 11
14,613	1,610	39	..	..	..	..	15,005	640	617	92·2	903	2,784	17 1 10
33,709	2,858	..	..	..	..	..	32,131	1,421	3,015	87·8	1,590	3,504	9 9 3
23,663	2,552	..	45	..	..	..	22,854	1,902	1,504	87·0	1,544	2,640	10 0 10
3,678	11,830	29	14	..	..	..	14,226	325	1,000	91·4	1,037	2,352	15 1 11
134,666	21,398	1,942	210	19	..	..	144,569	5,151	8,515	91·3	1,329	18,456	11 10 7
4,094	1,028	868	173	584	4,044	2,703	5,809	301	637	86·0	675	1,608	23 13 3
32,297	1,078	356	..	25	5,689	28,067	32,287	711	758	95·6	1,875	2,784	8 3 11
18,717	690	9	..	1,147	3,651	16,912	19,512	187	864	94·7	1,142	2,784	13 8 7
13,845	1,333	56	..	298	3,991	11,541	14,809	446	277	95·3	863	2,784	17 14 8
24,493	2,679	..	..	1,685	15,143	13,714	25,871	871	2,115	89 6	1,374	3,308	11 7 4
20,078	3,272	..	28	1,285	4,759	20,804	22,322	1,444	1,797	87·3	1,504	2,640	10 5 2
7,895	32,751	17	..7	107	12,863	27,914	39,642	421	714	97·2	2,718	2,352	5 12 3
2,025	492	..	..	56	778	1,795	2,150	203	220	83·5	321	196	7 9 10
124,344	43,323	1,306	208	5,187	50,918	123,450	162,402	4,584	7,382	93·1	1,465	18,456	10 9 4

from the Establishment of Western Guzerat were transferred to the Kattywar Circle.

TABLE

VACCINATION UNDER

Table of Vaccination under Civil Surgeons and others, arranged according

Number.	Superintending Surgeons' Divisions.	Civil Station.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.			Sex.	
					1855.	Increase.	Decrease.	Males.	Females.
1	Presidency	Tanna	1	390	278	112	....	203	187
		Alibaugh	..	45	5	40	....	24	21
		Bandora Dispensary	..	309	41	268	....	150	159
		Total....	1	744	324	420	....	377	367
2	Poona	Poona	1	1,681	1,594	87	....	950	731
		Ahmednuggur	1	1,052	947	105	....	616	436
		Sattara	1	1,661	3,134	..	1,473	914	747
		Dhoolia	1	989	1,510	..	521	519	470
		Nassick	1	1,461	1,390	71	....	795	666
		Mahableshwur	..	118	66	52	....	67	51
		Total..	5	6,962	8,641	..	1,679	3,861	3,101
3	Northern	Ahmedabad	1	2,712	3,208	..	496	1,463	1,249
		Kaira	1	843	684	159	....	508	335
		Rajkote	1	1,752	2,486	..	734	935	817
		Surat	1	1,175	1,070	105	....	620	555
		Broach	1	1,447	1,534	..	87	911	536
		Bhooj Dispensary	..	6,186	7,345	..	1,159	3,626	2,560
		Total..	5	14,115	16,327	..	2,212	8,063	6,052
4	Southern	Belgaum	1	606	667	..	61	349	257
		Dharwar	1	1,444	1,815	..	371	850	594
		Sholapore	1	1,066	1,088	..	22	635	431
		Kolapore	1	2,820	2,438	382	....	1,418	1,402
		Rutnagherry	1	870	862	8	....	484	386
		Vingorla	..	167	102	65	....	99	68
		Total..	5	6,973	6,972	1	....	3,835	3,138
5	Sind	Kurrachee	1	628	1,123	..	495	400	228
		Hyderabad	1	2,353	2,078	275	....	1,735	618
		Shikarpoor	1	1,547	964	583	....	806	741
		Kurrachee Dispensary	..	....	112	..	....	..	....
		Larkhana	..	....	135	..	....	..	....
		Jerruck	..	17	119	..	102	2	15
		Meerpoor	..	45	239	..	194	26	19
		Mahomed Khan's Tanda	..	125	..	..	....	71	54
		Khittee	..	....	64	..	....	..	....
		Taroosha	..	36	..	..	....	25	11
		Halla	..	88	..	..	....	57	31
		Roree	..	197	..	..	....	94	103
		Total..	3	5,036	4,834	202	....	3,216	1,820
6	Aden	Aden	1	1,786	825	961	....	1,277	509
7	Persian Gulf	Bushire	..	115	382	..	267	59	56
		Grand Total..	20	35,731	38,305	..	2,574	20,688	15,043

No. 2 (For 1856).

Civil Surgeons and others.

to Divisions, and showing the Details as in Table No. 1, for the Year 1856.

Total Number Vaccinated, arranged according to													
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of persons Vaccinated by each Vaccinator.	Pay of Native Vaccinators per Annum.	Average Cost of every 100 Persons Vaccinated, exclusive of Medical Officers' Pay and Allowances.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful.	Doubtful.				
												Rs.	Rs. a. p.
228	53	95	7	7	..	..	370	18	2	94·8	390	108	27 11 1
15	..	3	..	27	..	..	42	3	..	93·3	..	..	....
29	8	237	4	31	..	..	272	9	28	88·0	..	..	....
272	61	335	11	65	..	..	684	30	30	91·9	390	108	27 11 1
1,373	155	136	16	1	..	..	1,435	49	197	85·3	1,681	216	12 13 7
832	188	32	..	....	..	..	1,033	3	16	98·0	1,052	108	10 4 3
1,542	110	5	1	3	..	..	1,467	23	171	88·3	1,661	216	13 0 1
860	113	12	..	4	..	..	931	..	58	94·1	989	144	14 8 11
1,408	46	7	..	....	..	..	1,062	72	327	72·6	1,461	108	7 6 3
67	23	27	1	....	..	..	78	30	10	66·1	..	..	....
6,082	635	219	18	8	..	..	6,006	177	779	86·2	1,369	792	11 9 1
2,353	335	21	3	....	..	..	2,502	123	87	92·2	2,712	288	10 9 10
733	108	1	1	....	..	..	819	2	22	97·1	843	108	12 12 11
1,331	395	26	..	....	..	..	1,612	57	83	92·0	1,752	108	6 2 7
862	258	9	46	....	..	..	1,040	124	11	88·5	1,175	216	18 6 1
997	423	..	27	....	..	..	1,300	67	80	89·4	1,447	108	7 7 5
2,951	3,235	..	..	....	..	..	5,830	6	350	94·2	..	..	....
9,227	4,754	57	77	....	..	..	13,103	379	633	92·8	1,586	828	10 7 1
399	129	78	..	....	..	..	568	22	16	93·7	606	108	17 13 1
1,275	159	10	..	....	..	..	1,238	114	92	85·7	1,444	108	7 7 8
691	375	..	..	....	..	..	838	74	154	78·6	1,066	108	10 2 1
2,778	41	1	..	....	..	..	2,648	41	131	93·9	2,820	216	7 10 6
813	53	4	..	....	..	..	633	67	170	72·7	870	108	12 6 7
92	44	31	..	....	..	..	166	..	1	99·4	..	..	....
6,048	801	124	..	....	..	..	6,091	318	564	87·3	1,361	648	9 8 4
267	313	31	8	9	..	..	589	4	35	93·7	628	108	17 3 1
665	1,683	5	..	....	..	..	2,243	108	2	95·3	2,353	108	4 9 5
984	554	7	..	2	..	..	1,510	37	....	97·6	1,547	108	6 15 8
..	..	..	..	....	..	..	..	..	....	..	..	..	....
..	..	..	..	....	..	..	..	..	....	..	..	..	....
..	17	..	..	....	..	..	17	..	....	100·0	..	..	....
18	27	..	..	....	..	..	14	31	....	31·1	..	..	....
44	81	..	..	....	..	..	121	..	4	96·8	..	..	....
..	..	..	..	....	..	..	..	..	....	..	..	..	....
17	19	..	..	....	..	..	12	24	....	33·3	..	..	....
23	65	..	..	....	..	..	88	..	....	100·0	..	..	....
117	73	..	..	7	..	..	195	2	....	98·9	..	..	....
2,135	2,832	43	8	18	..	..	4,789	206	41	95·0	1,509	324	7 2 5
125	1,606	51	..	4	..	..	1,786	..	....	100·0	1,786	108	6 0 9
..	106	5	..	4	..	..	69	46	....	60·0	..	..	....
23,889	10,795	834	114	99	..	..	32,528	1,156	2,047	91·0	1,414	2,808	9 14 10

TABLE

VACCINATION UNDER

Table of Vaccination under Civil Surgeons and others, arranged according

Number.	Superintending Surgeons' Divisions.	Civil Stations.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.			Sex.	
					1856.	Increase.	Decrease.	Males.	Females.
1	PRESIDENCY	Tanna	1	254	390	..	136	137	117
		Alibaugh	..	69	45	24	....	33	36
		Bandora Dispensary	..	76	309	..	233	51	25
		Total..	1	399	744	..	345	221	178
2	POONA	Poona	1	1,692	1,681	11	....	992	700
		Ahmednuggur	1	1,112	1,052	60	....	661	451
		Sattara	1	1,233	1,661	..	428	648	585
		Dhoolia.....	1	924	989	..	65	474	450
		Nassick.....	1	1,432	1,461	..	29	759	673
		Mahableshwur	..	....	118	..	....	..	....
		Total..	5	6,393	6,962	..	569	3,534	2,859
3	NORTHERN	Ahmedabad	1	2,782	2,712	70	....	1,451	1,331
		Kaira	1	1,448	843	605	....	916	532
		Rajkote.....	1	524	1,752	..	1,228	264	260
		Surat.....	1	1,894	1,175	719	....	1,012	882
		Broach	1	1,535	1,447	88	....	922	613
		Bhooj Dispensary	..	38	6,186	..	6,148	23	15
		Total..	5	8,221	14,115	..	5,894	4,588	3,633
4	SOUTHERN.....	Belgaum	1	527	606	..	79	314	213
		Dharwar	1	1,643	1,444	199	....	924	719
		Sholapore.....	1	1,588	1,066	522	....	1,073	515
		Kolapore	1	3,197	2,820	377	....	1,614	1,583
		Rutnagherry	1	971	870	101	....	507	464
		Vingorla	..	202	167	35	....	127	75
		Total..	5	8,128	6,973	1,155	....	4,559	3,560
5	SIND	Kurrachee	1	651	628	23	....	368	283
		Hyderabad	1	1,526	530	996	....	914	612
		Shikarpoor	1	933	1,547	..	614	455	478
		Kurrachee Dispensary	..	17	..	17	....	6	11
		Ditto Jail.....	..	74	..	74	....	72	2
		Jerruck.....	..	261	17	244	....	116	145
		Meerpoor	..	31	45	..	14	16	15
		Roree	..	269	197	72	....	157	112
		Mahomed Khan's Tanda ..	..	10	125	..	115	5	5
		Hyderabad Civil	..	173	1,823	..	1,650	167	6
		Halla.....	..	14	88	..	74	10	4
		Tarousha	..	42	36	6	....	18	24
		Total..	3	4,001	5,036	..	1,066	2,304	1,697
6	ADEN	Aden	1	901	1,786	..	885	714	187
7	PERSIAN GULF.....	Bushire.....	..	195	115	80	....	91	104
		Grand Total..	20	28,238	35,731	..	7,493	16,011	12,227

No. 2 (For 1857).

Civil Surgeons and others.

to Divisions, and showing the Details as in Table No. 1, for the Year 1857.

Total Number Vaccinated, arranged according to Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of Persons Vaccinated by each Vaccinator.	Pay of Native Vaccinators per Annum.	Average Cost of every 100 Persons Vaccinated, exclusive of Medical Officers' Pay and Allowances.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year	Successful.	Unsuccessful.	Doubtful.			Rs.	Rs. a. p.
177	29	30	8	10	60	194	240	14	....	94·8	254	108	42 8 3
43	7	1	..	18	23	46	55	5	9	79·7	..	..	....
20	1	47	3	5	42	34	70	3	3	92·1	..	..	....
240	37	78	11	33	125	274	365	22	12	91·4	254	108	42 8 3
1,305	145	222	18	2	529	1,163	1,424	70	198	84·1	1,692	216	12 12 3
917	166	28	1	....	93	1,019	1,093	5	14	98·2	1,112	108	9 11 4
1,140	75	10	1	7	560	673	1,069	29	135	86·6	1,233	216	17 8 3
795	122	6	1	....	659	265	867	1	56	93·8	924	144	15 9 4
1,279	42	3	..	108	899	533	1,015	60	357	70·8	1,432	108	7 8 8
..	..	..	..	....	..	....	..	..	....	..	..	..	....
5,436	550	269	21	117	2,740	3,653	5,468	165	760	85·5	1,278	792	12 6 2
2,353	418	7	4	....	1,292	1,490	2,607	89	86	93·7	2,782	288	10 5 7
802	207	3	..	436	483	965	1,267	177	4	87·5	1,448	108	7 7 4
433	91	..	..	....	195	329	469	27	28	89·5	524	108	20 9 9
1,335	480	9	64	6	596	1,298	1,647	204	43	86·9	1,894	216	11 6 5
1,053	456	2	24	....	807	728	1,372	71	92	89·3	1,535	108	7 0 6
30	8	..	..	....	5	33	28	5	5	73·7	..	..	....
6,006	1,660	21	92	442	3,378	4,843	7,390	573	258	90·0	1,637	828	10 1 10
430	66	31	..	....	193	334	479	48	....	90·8	527	108	20 7 10
1,389	248	6	..	....	377	1,266	1,500	77	66	91·2	1,643	108	6 3 1
1,322	262	4	..	....	260	1,328	1,387	..	201	87·3	1,588	108	6 12 9
3,124	73	..	..	....	825	2,372	2,823	101	273	88·3	3,197	216	6 12 1
735	234	2	..	....	164	807	863	57	51	88·8	971	108	11 1 11
163	36	3	..	....	80	122	201	..	1	99·5	..	..	....
7,163	919	46	..	....	1,899	6,229	7,253	283	592	89·2	1,585	648	7 15 6
312	273	59	4	3	498	153	584	39	28	89·7	651	108	16 9 5
632	887	6	1	....	797	729	1,313	129	84	86·0	1,526	108	7* 1 2
608	320	5	..	....	771	162	932	1	....	99·8	933	108	11 9 2
3	2	..	..	12	9	8	4	13	....	23·5	..	..	....
5	68	1	..	....	1	73	25	47	2	33·7	..	..	....
33	228	..	..	....	39	222	259	2	....	99·2	..	..	....
..	31	..	..	....	2	29	27	2	2	87·0	..	..	....
138	127	2	..	2	154	115	268	..	1	99·6	..	..	....
9	1	..	..	....	5	5	10	..	....	100.0	..	..	....
41	131	..	1	....	..	173	162	11	....	93·6	..	..	....
3	11	..	..	....	5	9	14	..	....	100·0	..	..	....
28	14	..	..	....	10	32	29	13	....	69·0	..	..	....
1,812	2,093	73	6	17	2,291	1,710	3,627	257	117	91·3	1,037	324	10 6 8
55	80	40	3	723	41	860	901	..	....	100·0	901	180	19 15 7
..	177	18	..	....	133	62	144	51	....	73·8	..	..	....
20,712	5,516	545	133	1,332	10,607	17,631	25,148	1,351	1,739	89·0	1,338	2,880	10 12 1

TABLE

VACCINATION UNDER

Table of Vaccination through the agency of the Native Chiefs, arranged according to the of Pay of Vaccinators and Cost of

Number.	Divisions.	Stations.	Medical Officers.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.		
						1855.	Increase.	Decrease.
	1856.							
1	Southern Division..	Kolapore, &c.....	Asst. Surgeon Johnstone ..	12	9,806	7,604	2,202	....
2	Western Guzerat...	Mahee Kanta	„ Lord, M.D...	10	30,152	22,595	7,557	....
3	Eastern Guzerat ..	Rewa Kanta	„ Peach, M.D..	8	6,742	3,051	3,691	....
4	Northern Deccan ..	Peint (Nassick) ..	„ Pelly	1	325	890	..	565
5	Southern Deccan ..	Sawunt Warree ..	Sub-Asst. Surgeon Spencer.	1	6,638	4,675	1,963	....
			Total..	32	53,663	45,072	8,591	....
	1857.					1856.		
1	Southern Division..	Kolapore, &c.....	Asst. Surgeon J. Mills	17	8,723	9,806	..	1,083
2	Western Guzerat ..	Mahee Kanta	„ R. Thorp ..	10	15,289	30,152	..	14,863
3	Eastern Guzerat ..	Rewa Kanta	„ C. Ross	12	7,756	6,742	1,014	....
4	Northern Deccan ..	Peint (Nassick) ..	Sub-Asst. Surg. R. Spencer.	1	305	325	..	20
5	Southern Deccan ..	Sawunt Warree ..	Asst. Surgeon J. Kearney ..	1	6,102	6,638	..	536
6	Kattywar Circle ..	Rajcote, &c.....	„ R. G. Lord, M.D.	16	5,838	..	..	....
			Total..	57	44,013	53,663	..	9,650

No. 3 (For 1856-57).

NATIVE CHIEFS' AGENCY.

Divisions of Vaccination, and showing Details as in Tables Nos. 1 *and* 2, *with the exception Vaccination, for the Years* 1856 *and* 1857.

Total Number Vaccinated, arranged according to													
Sex.		Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of Persons Vaccinated by each Vaccinator.
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful.	Doubtful.		
5,263	4,543	9,438	360	8	..	....	..	....	8,842	154	810	90·1	817
15,436	14,716	27,620	2,532	..	..	....	..	....	26,340	911	2,901	87·3	3,015
3,726	3,016	6,244	496	..	2	....	..	....	5,945	429	368	88·1	843
169	156	325	..	..	..	....	..	....	247	33	45	76·0	325
3,271	3,367	6,460	91	87	..	....	..	....	5,919	436	283	89·1	6,638
27,865	25,798	50,087	3,479	95	2	....	..	....	47,293	1,963	4,407	88·1	1,677
4,621	4,102	8,109	349	..	..	265	2,155	6,568	8,121	213	389	93·1	513
8,065	7,224	12,625	1,264	..	..	1,400	6,286	9,003	13,565	548	1,176	88·7	1,529
4,057	3,099	6,978	686	2	16	74	1,799	5,957	6,326	691	739	81·5	646
138	167	305	..	..	..	....	37	268	253	17	35	83·0	305
3,073	3,029	5,844	142	116	..	....	811	5,291	5,000	664	438	81·9	6,102
3,036	2,802	5,170	619	..	..	49	2,542	3,296	5,164	247	427	88·4	365
22,990	21,023	39,031	3,060	118	16	1,788	13,630	30,383	38,429	2,380	3,204	87·3	772

TABLE

General Abstract of Vaccination

Designation of Tables.	Total Number Vaccinated.	Compared with last Year.			Sex.	
		1855.	Increase.	Decrease.	Males.	Females.
1856.						
No. 1, Vaccination under Superintendents	158,235	176,389	....	18,154	85,850	72,385
No. 2, Ditto under Civil Surgeons, &c.....	35,731	38,305	....	2,574	20,688	15,043
No. 3, Ditto by the Native Chiefs' agency	53,663	45,072	8,591	....	27,865	25,798
Total..	247,629	259,766	....	12,137	134,403	113,226
1857.		1856.				
No. 1, Vaccination under Superintendents.....	174,368	158,235	16,133	..	96,989	77,379
No. 2, Ditto under Civil Surgeons, &c.....	22,238	35,731	..	7,493	16,011	12,227
No. 3, Ditto by the Native Chiefs' agency	44,013	53,663	..	9,650	22,990	21,023
Total..	246,619	247,629	..	1,010	135,990	110,629

No. 4.

FOR THE YEARS 1856-57.

Total Number Vaccinated, arranged according to										
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful.	Doubtful.	
134,666	21,398	1,942	210	19	....	....	144,569	5,151	8,515	91·3
23,889	10,795	834	114	99	....	....	32,528	1,156	2,047	91·0
50,087	3,479	95	2	....	....	....	47,293	1,963	4,407	88·1
208,642	35,672	2,871	326	118	....	....	224,390	8,270	14,969	90·6
124,344	43,323	1,306	208	5,187	50,918	123,450	162,402	4,584	7,382	93·1
20,712	5,516	545	133	1,332	10,607	17,631	25,148	1,351	1,739	89·0
39,031	3,060	118	16	1,788	13,630	30,383	38,429	2,380	3,204	87·3
184,087	51,899	1,969	357	8,307	75,155	171,464	225,979	8,315	12,325	91·6

TABLE

SMALL-

Table showing the Admissions and Deaths from Small-pox amongst European and Native Troops, with the Percentage of Deaths to Strength

Divisions.	European Troops.									Native Troops.								
	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to Strength.	Percentage of Deaths to Treated.	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to Strength.	Percentage of Deaths to Treated.
1856.																		
Presidency Division	673	..	2	2	..	..	2	..	..	4,165	..	6	6	3	1	2	0·02	16·6
Poona „	3,026	..	3	3	2	1	..	0·09	33·3	7,214	..	9	9	8	1	.	0·01	11·1
Northern „	1,00[illegible]	..	..	..	..	..	..	..	..	7,243	..	14	14	10	..	4	..	..
Southern „	1,128	..	..	..	..	..	..	..	..	4,137	..	4	4	4	..	..	..	..
Sind „	2,076	..	..	..	..	..	..	..	..	5,889	..	1	1	..	..	1	..	..
Rajpootana Field Force.	104	..	..	..	..	..	..	..	..	3,409	2	1	3	3	..	..	..	..
Aden	573	..	..	..	..	..	..	..	..	1,068	..	..	..	..	..	..	..	..
Persian Field Force	379	..	..	..	..	..	..	..	..	522	..	3	3	2	1	..	0·2	33·3
Total..	8,966	..	5	5	2	1	2	0·03	33·3	33,647	2	38	40	30	3	7	0·1	7·5
1857.																		
Presidency Division	2,675	2	3	5	3	..	2	..	..	3,698	2	5	7	2	1	4	0.02	14.3
Poona „	4,481	..	1	1	..	1	..	0·02	100·0	8,763	..	..	..	..	..	..	..	..
Northern „	1,848	..	..	..	..	..	..	..	..	6,179	4	1	5	3	1	1	0·01	20·0
Southern „	1,050	..	..	..	..	..	..	..	..	4,744	..	8	8	8	..	..	..	..
Sind „	3,019	..	..	..	..	..	..	..	..	5,013	1	1	2	1	..	1	..	..
Rajpootana Field Force.	382	..	2	2	1	..	1	..	..	1,464	..	1	1	1	..	..	..	..
Aden	495	..	..	..	..	..	..	..	..	1,092	..	1	1	1	..	..	..	..
Persian Field Force	1,415	..	..	..	..	..	..	..	..	3,421	..	..	..	..	..	..	..	..
Regiments Absent from the Presidency from June to December	1,102	..	..	..	..	..	..	..	..	....	..	..	..	..	..	..	..	..
Total..	16,467	2	6	8	4	1	3	0·006	12·5	34,374	7	17	24	16	2	6	0·005	8·3

No. 5 (For 1856-57).

Pox.

Prisoners in Jails, Civil Hospitals, and Dispensaries, in each Division of the Bombay Presidency, and to Treated; for the Years 1856 *and* 1857.

Prisoners in Jails.										Civil Hospitals.										Dispensaries.									
Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to			Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to			Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to		
							Strength.	Treated.									Strength.	Treated.									Strength.	Treated.	
929	..	..	..	..	..	..	..	..			1	30	31	15	16	..	..	51·6			..	7	7	7	..	..	..	..	
1,278	..	1	1	1	..	..	..	..			..	3	3	2	1	..	..	33·3			..	..	..	..	..	..	..	..	
858	..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..	
1,282	..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..			..	3	3	1	1	1	..	33·3	
1,390	..	2	2	2	..	..	..	..			..	1	1	1	..	..	..	..			1	2	3	3	..	..	..	..	
..	..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..	
155	..	..	..	..	..	..	..	..			4	46	50	17	33	..	..	66·0			..	..	..	..	..	..	..	..	
..	..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..	
5,892	..	3	3	3	..	..	..	..			5	80	85	35	50	.	..	58·8			1	12	13	11	1	1	..	7·6	
973	..	..	..	..	..	..	..	..			..	21	21	11	9	1	..	42·8			..	2	2	2	..	..	..	..	
1,325	..	..	..	..	..	..	..	..			..	1	1	1	..	..	..	..			..	..	..	..	..	..	..	..	
929	..	..	..	..	..	..	..	..			..	1	1	1	..	..	..	..			..	..	..	..	..	..	..	..	
1,282	..	..	..	..	..	..	..	..			..	4	4	4	..	..	..	..			1	5	6	6	..	..	..	..	
1,235	..	1	1	1	..	..	..	..			..	..	..	..	..	..	..	..			..	1	1	1	..	..	..	..	
..	..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..	
152	..	1	1	..	1	..	0·6	100·0			..	62	62	37	20	5	..	32·2			..	..	..	..	..	..	..	..	
..	..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..	
..	..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..			..	..	..	..	..	..	..	..	
5,896	..	2	2	1	1	..	0·02	50·0			..	89	89	54	29	6	..	32·5			1	8	9	9	..	..	..	..	

APPENDIX No. 2.

TABLES RESPECTING VACCINATION IN THE BOMBAY PRESIDENCY, FOR FIVE YEARS, FROM 1853 TO 1857.

TABLE No. 1 A.

VACCINATION UNDER SUPERINTENDENTS.

Table showing the Total Number Vaccinated by Superintendents, arranged according to Sex, Caste, Age, and Result, with Percentage of Success, for the Years 1853, 1854, 1855, 1856, *and* 1857, *with an Average of Vaccination for Five Years.*

YEARS.	Total Number Vaccinated.	SEX.		CASTE.					AGE.		RESULT.			Percentage of Successes.
		Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
1853.....	114,589	63,953	50,636	93,704	13,295	1,597	356	5,637	..	..	97,354	9,905	7,330	85·5
1854.....	169,231	95,239	73,992	135,732	28,776	959	205	3,559	..	..	149,347	7,446	12,438	88·6
1855.....	176,389	96,670	79,719	149,006	25,591	1,409	348	35	..	..	159,332	5,308	11,749	90·3
1856.....	158,235	85,850	72,385	134,666	21,398	1,942	210	19	..	..	144,569	5,151	8,515	91·3
1857.....	174,368	96,989	77,379	124,344	43,323	1,306	208	5,187	50,918	123,450	162,402	4,584	7,382	93·1
Total....	792,812	438,701	354,111	637,452	132,383	7,213	1,327	14,437	..	..	713,004	32,394	47,414	448·8
Average of 5 Years.....	158,562	87,740	70,822	127,490	26,477	1,443	265	2,887	..	..	142,601	6,478	9,483	89·9

TABLE No. 1 B.

VACCINATION UNDER SUPERINTENDENTS.

Table showing the Total Number Vaccinated in each Superintendent's Division, arranged according to Sex, Caste, Age, and Result, with Percentage of Success, for the Years 1853, 1854, 1855, 1856, *and* 1857, *with an Average of Five Years Vaccination in each Division.*

Division.	Years.	Total Number Vaccinated	Sex.		Caste.					Age.		Result.			Percentage of Success.
			Males.	Females.	Hindoos.	Mussalmans.	Christians.	Parsees.	Other Caste.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
Presidency	1853..	7,562	4,554	3,008	4,661	1,136	1,044	243	478	..	..	6,601	175	786	87·2
	1854..	6,909	4,162	2,747	4,504	1,045	689	201	470	..	..	5,865	251	793	84·8
	1855..	8,494	5,210	3,284	5,504	1,617	1,171	202	..	..	..	7,532	123	839	88·6
	1856..	7,183	4,355	2,828	4,972	1,042	1,049	120	..	..	..	6,424	..	759	89·4
	1857..	6,747	4,169	2,578	4,094	1,028	868	173	584	4,044	2,703	5,809	301	637	86·0
Average of 5 Years....		7,379	4,490	2,889	4,747	1,174	964	188	306	..	..	6,446	170	763	87·2
Concan	1853..	32,380	16,783	15,597	28,054	1,020	416	84	2,806	..	..	29,357	2,155	868	90·6
	1854..	33,452	17,134	16,318	31,785	610	90	..	967	..	..	30,973	1,646	833	92·5
	1855..	35,955	18,547	17,408	34,583	1,125	170	43	34	..	..	33,852	1,040	1,063	94·1
	1856..	33,798	17,389	16,409	32,111	817	820	31	19	..	..	32,255	686	857	95·4
	1857..	33,756	17,346	16,410	32,297	1,078	356	..	25	5,689	28,067	32,287	711	758	95·6
Average of 5 Years....		33,868	17,440	16,428	31,766	930	370	32	770	..	..	31,745	1,247	876	93·6
Northern Deccan	1853..	21,108	11,090	10,018	18,935	957	7	..	1,209	..	..	18,600	2,063	445	88·1
	1854..	24,024	12,768	11,256	21,888	1,137	25	..	974	..	..	22,607	348	1,069	94·1
	1855..	26,490	14,100	12,390	25,236	1,247	7	..	..	..	..	25,206	163	1,121	95·1
	1856..	22,614	12,040	10,574	21,920	689	5	..	..	..	..	21,674	177	763	95·8
	1857..	20,563	10,549	10,014	18,717	690	9	..	1,147	3,651	16,912	19,512	187	864	94·7
Average of 5 Years....		22,959	12,109	10,850	21,339	944	10	..	666	..	..	21,519	588	852	93·6

Division.	Years.	Total Number Vaccinated.	Sex.		Caste.					Age.		Result.			Percentage of Success.
			Males.	Females.	Hindoos.	Mussalmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
Southern Deccan	1853..	2,741	1,618	1,123	2,351	337	53	..	..	..	..	2,540	143	58	92·6
	1854..	23,205	13,762	9,443	20,984	1,929	114	..	178	..	..	21,348	473	1,384	92·0
	1855..	16,208	9,123	7,085	14,354	1,831	19	4	..	..	..	14,724	439	1,045	90·8
	1856..	16,262	8,656	7,606	14,613	1,610	39	..	..	..	..	15,005	640	617	92·2
	1857..	15,532	8,090	7,442	13,845	1,333	56	..	298	3,991	11,541	14,809	446	277	95·3
Average of 5 Years....		14,789	8,249	6,540	13,229	1,408	56	1	95	..	..	13,685	428	676	92·6
Western Guzerat	1853..	28,129	16,344	11,785	24,157	2,828	..	..	1,144	..	..	21,354	2,802	3,973	75·8
	1854..	38,295	20,855	17,440	34,546	3,403	..	..	346	..	..	29,848	2,477	5,970	77·9
	1855..	45,156	24,263	20,893	41,396	3,760	..	..	..	..	..	38,524	1,915	4,717	85·3
	1856..	36,567	19,373	17,194	33,709	2,858	..	..	..	..	..	32,131	1,421	3,015	87·8
	1857..	28,857	15,270	13,587	24,493	2,679	..	..	1,685	15,143	13,714	25,871	871	2,115	89·6
Average of 5 Years....		35,401	19,221	16,180	31,660	3,106	..	..	635	..	..	29,546	1,897	3,958	83·3
Eastern Guzerat	1853..	16,052	9,293	6,759	14,130	1,902	..	20	..	..	..	13,073	2,195	784	81·4
	1854..	19,889	11,713	8,176	16,610	2,644	8	3	624	..	..	16,941	1,768	1,180	85·1
	1855..	23,277	13,252	10,025	20,865	2,308	5	99	..	..	..	20,427	1,311	1,539	87·7
	1856..	26,260	14,772	11,488	23,663	2,552	..	45	..	..	..	22,854	1,902	1,504	87·0
	1857..	25,563	14,586	10,977	20,978	3,272	..	28	1,285	4,759	20,804	22,322	1,444	1,797	87·3
Average of 5 Years....		22,208	12,723	9,485	19,249	2,535	3	39	382	..	..	19,123	1,724	1,361	85·7
Sind	1853..	6,617	4,271	2,346	1,416	5,115	77	9	..	..	..	5,829	372	416	88·0
	1854..	23,457	14,845	8,612	5,415	18,008	33	1	..	..	..	21,765	483	1,209	92·7
	1855..	20,809	12,175	8,634	7,068	13,703	37	..	1	..	..	19,067	317	1,425	91·6
	1856..	15,551	9,265	6,286	3,678	11,830	29	14	..	..	..	14,226	325	1,000	91·4
	1857..	40,777	25,577	15,200	7,895	32,751	17	7	107	12,863	27,914	39,642	421	714	97·2
Average of 5 Years....		21,442	13,226	8,216	5,094	16,281	39	6	22	..	..	20,106	383	953	92·2
Kattywar Circle	1857..	2,573	1,402	1,171	2,025	492	..	..	56	778	1,795	2,150	203	220	83·5
Total.....		792,812	438,701	354,111	637,452	132,383	7,213	1,327	14,437	..	..	713,004	32,394	47,414	448·8

TABLE No. 2 A.

Vaccination under Civil Surgeons and Others.

Table showing the Total Number Vaccinated by Civil Surgeons and others, arranged according to Sex, Caste, Age, and Result, with Percentage of Success, for the Years 1853, 1854, 1855, 1856, *and* 1857, *with an Average of Vaccination for Five Years.*

Years.	Total Number Vaccinated.	Sex.		Caste.					Age.		Result.			Percentage of Success.
		Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
1853.....	46,341	26,379	19,962	39,149	6,621	371	74	126	..	..	40,714	3,201	2,426	87·8
1854.....	34,523	19,847	14,676	24,531	9,277	446	94	175	..	..	30,863	1,588	2,072	89·6
1855.....	38,305	21,949	16,356	28,730	8,806	561	183	25	..	..	34,999	1,184	2,122	91·3
1856.....	35,851	20,762	15,089	23,927	10,877	834	114	99	..	..	32,608	1,195	2,048	91·0
1857.....	28,306	16,048	12,258	20,732	5,557	545	133	1,339	10,632	17,674	25,172	1,391	1,743	89·0
Total....	183,326	104,985	78,341	137,069	41,138	2,757	598	1,764	..	..	164,356	8,559	10,411	448·7
Average of 5 years.....	36,665	20,997	15,468	27,414	8,227	551	119	354	..	..	32,871	1,712	2,082	89·7

TABLE

VACCINATION UNDER CIVIL

Table showing the Total Number Vaccinated at each Station by Civil Surgeons and for the years 1853, 1854, 1855, 1856, *and* 1857, *with*

DIVISIONS AND STATIONS.		Years.	Total Number Vaccinated.	SEX.	
				Males.	Females.
PRESIDENCY DIVISION..	Tanna	1853..	57	29	28
		1854..	191	127	64
		1855..	278	150	128
		1856..	390	203	187
		1857..	254	137	117
		Average of 5 years....	234	129	105
	Alibaugh	1853..	112	64	48
		1854..	34	19	15
		1855..	5	2	3
		1856..	45	24	21
		1857..	69	33	36
		Average of 5 years....	53	28	25
	Bandora	1853..	5	4	1
		1854..	35	27	8
		1855..	41	24	17
		1856..	309	150	159
		1857..	76	51	25
		Average of 5 years....	93	51	42
POONA DIVISION	Poona	1853..	1,166	646	520
		1854..	1,438	820	618
		1855..	1,594	890	704
		1856..	1,681	950	731
		1857..	1,692	992	700
		Average of 5 years....	1,514	859	655
	Sattara	1853..	4,848	2,697	2,151
		1854..	3,341	1,907	1,434
		1855..	3,134	1,713	1,421
		1856..	1,661	914	747
		1857..	1,233	648	585
		Average of 5 years....	2,843	1,576	1,267
	Ahmednuggur	1853..	287	168	119
		1854..	830	476	354
		1855..	947	554	393
		1856..	1,052	616	436
		1857..	1,112	661	451
		Average of 5 years....	846	495	351

No. 2 B.

Surgeons and Others.

others, arranged according to Sex, Caste, Age, and Result, with Percentage of Success, an Average of Five Years Vaccination at each Station.

Caste.					Age.		Result.			Percentage of Success.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
30	4	7	15	1	..	..	30	6	21	52·6
147	7	17	17	3	..	..	120	39	32	62·8
198	51	18	11	..	..	..	206	60	12	74·1
228	53	95	7	7	..	..	370	18	2	94·8
177	29	30	8	10	60	194	240	14	..	94·8
156	29	33	12	4	..	..	193	27	14	75·8
89	10	4	..	9	..	..	84	11	17	75·0
23	3	3	1	4	..	..	25	8	1	73·5
..	5	..	..	..	..	..	5	..	..	100·0
15	..	3	..	27	..	..	42	3	..	93·3
43	7	1	..	18	23	46	55	5	9	79·7
34	5	2	½	12	..	..	42	5	6	84·3
1	..	2	2	..	..	..	2	..	3	40·0
24	2	7	2	..	..	..	30	..	5	85·7
15	1	24	1	..	..	..	28	..	13	68·2
29	8	237	4	31	..	..	272	9	28	88·0
20	1	47	3	5	42	34	70	3	3	92·1
18	2	63	3	7	..	..	80	2	11	74·8
916	139	104	..	7	..	..	894	94	178	76·6
1,109	167	143	9	10	..	..	1,182	67	189	82·2
1,328	121	131	13	1	..	..	1,307	62	225	82·0
1,373	155	136	16	1	..	..	1,435	49	197	85·3
1,305	145	222	18	2	529	1,163	1,424	70	198	84·1
1,206	146	147	11	4	..	..	1,249	68	197	82·0
4,622	136	4	..	86	..	..	3,839	237	772	79·1
3,122	160	12	1	46	..	..	3,078	18	245	92·1
2,929	106	8	91	..	..	..	2,867	..	267	91·4
1,542	110	5	1	3	..	..	1,467	23	171	88·3
1,140	75	10	1	7	560	673	1,069	29	135	86·6
2,671	117	8	19	28	..	..	2,464	61	318	87·5
204	46	24	..	13	..	..	237	40	10	82·5
615	167	45	..	3	..	..	750	59	21	90·3
754	168	24	1	..	..	..	913	16	18	96·4
832	188	32	..	..	..	..	1,033	3	16	98·0
917	166	28	1	..	93	1,019	1,093	5	14	98·2
665	147	31	⅔	3	..	..	805	25	16	93·1

Divisions and Stations.		Years.	Total Number Vaccinated.	Sex.	
				Males.	Females.
Poona Division	Nassick	1853..	452	224	228
		1854..	1,255	607	648
		1855..	1,390	822	568
		1856..	1,461	795	666
		1857..	1,432	759	673
		Average of 5 years....	1,198	641	557
	Dhoolia	1853 .	222	125	97
		1854..	681	352	329
		1855..	1,510	775	735
		1856..	989	519	470
		1857..	924	474	450
		Average of 5 years....	865	449	416
	Mahableshwar	1853..	35	19	16
		1854..	175	114	61
		1855..	66	35	31
		1856..	118	67	51
		1857..	..	..	..
		Average of 5 years....	79	47	32
Northern Division ..	Ahmedabad	1853..	3,004	1,793	1,211
		1854..	3,117	1,704	1,413
		1855..	3,208	1,636	1,572
		1856..	2,712	1,463	1,249
		1857..	2,782	1,451	1,331
		Average of 5 years....	2,965	1,609	1,356
	Kaira	1853..	400	227	173
		1854..	949	500	449
		1855..	684	380	304
		1856..	843	508	335
		1857..	1,448	916	532
		Average of 5 years....	865	506	359
	Rajcote	1853..	6,365	3,614	2,751
		1854..	2,503	1,376	1,127
		1855..	2,486	1,363	1,123
		1856..	1,752	935	817
		1857..	524	264	260
		Average of 5 years....	2,726	1,510	1,216
	Surat	1853..	1,390	742	648
		1854..	1,194	648	546
		1855..	1,070	583	487
		1856..	1,175	620	555
		1857..	1,894	1,012	882
		Average of 5 years....	1,345	721	624
	Broach	1853..	887	546	341
		1854..	1,273	798	475
		1855..	1,534	921	613
		1856..	1,447	911	536
		1857..	1,535	922	613
		Average of 5 years....	1,335	819	516

Caste.					Age.		Result.			Percentage of Success.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful	Unsuccessful.	Doubtful.	
433	14	5	..	..	..	..	253	131	68	55·9
1,193	45	17	..	..	..	..	966	46	243	76·9
1,347	37	6	..	..	..	..	1,091	33	266	78·4
1,408	46	7	..	..	..	..	1,062	72	327	72·6
1,279	42	3	..	108	899	533	1,015	60	357	70·8
1,132	37	8	..	21	..	..	878	68	252	70·9
208	7	7	..	..	..	..	106	58	58	47·7
613	60	8	..	..	..	..	608	46	27	89·3
1,330	174	6	..	..	..	..	1,449	6	55	95·9
860	113	12	..	4	..	..	931	..	58	94·1
795	122	6	1	..	659	265	867	1	56	93·8
761	95	8	⅛	1	..	..	792	22	51	84·2
23	10	1	..	1	..	..	16	19	..	45·7
154	12	9	..	..	..	..	143	10	22	81·7
40	7	18	1	..	..	..	59	4	3	89 4
67	23	27	1	..	..	..	78	30	10	66·1
..	..	..	..	..	..	..	..	..	..	..
57	10	11	⅖	⅕	..	..	59	11	9	56·6
2,647	332	18	7	..	..	..	2,424	362	218	80·6
2,839	252	20	3	3	..	..	2,695	253	109	86·4
2,781	413	12	2	..	..	..	2,935	171	102	91·4
2,353	335	21	3	..	..	..	2,502	123	87	92·2
2,353	418	7	4	..	1,292	1,490	2,607	89	86	93·7
2,594	350	16	4	1	..	..	2,633	200	132	88·9
346	54	..	..	..	..	..	360	16	24	90·0
839	109	1	..	..	..	..	894	21	34	94·2
604	77	2	1	..	..	..	654	12	18	95·1
733	108	1	1	..	..	..	819	2	22	97·1
802	207	3	..	456	483	965	1,267	177	4	87·5
665	111	1	1	87	..	..	799	46	20	92·8
4,609	1,746	7	3	..	..	..	5,880	245	240	92·3
1,940	562	1	..	..	..	..	2,358	43	102	94·2
1,886	589	10	1	..	..	..	2,313	67	106	93·0
1,331	395	26	..	..	..	..	1,612	57	83	92·0
433	91	..	..	..	195	329	469	27	28	89·5
2,040	676	9	1	..	..	..	2,526	88	112	92·2
1,075	292	2	21	..	..	..	1,181	209	..	85·0
879	284	6	25	..	..	..	1,085	105	4	90·8
819	227	4	20	..	..	..	978	86	6	91·4
862	258	9	46	..	..	..	1,040	124	11	88·5
1,335	480	9	64	6	596	1,298	1,647	204	43	86·9
994	309	6	35	1	..	..	1,186	146	13	88·5
689	167	7	24	..	..	..	773	95	19	87·1
918	321	..	34	..	..	..	1,090	90	93	85·5
1,139	370	..	25	..	..	..	1,412	60	62	92·0
997	423	..	27	..	..	..	1,300	67	80	89·4
1,053	456	2	24	..	807	728	1,372	71	92	89·3
959	347	2	27	..	..	..	1,189	77	69	88·7

Divisions and Stations.		Years.	Total Number Vaccinated.	Sex.	
				Males.	Females.
Northern Division....	Bhooj	1853..	61	38	23
		1854..	218	116	102
		1855..	7,345	4,137	3,208
		1856..	6,186	3,626	2,560
		1857..	38	23	15
	Average of 5 years....		2,769	1,588	1,181
Southern Division....	Belgaum	1853..	7,410	4,403	3,007
		1854..	1,322	707	615
		1855..	667	373	294
		1856..	606	349	257
		1857..	527	314	213
	Average of 5 years....		2,106	1,229	877
	Dharwar	1853..	11,082	6,420	4,662
		1854..	2,470	1,355	1,115
		1855..	1,815	1,125	690
		1856..	1,444	850	594
		1857..	1,643	924	719
	Average of 5 years....		3,691	2,135	1,556
	Sholapoor	1853..	884	528	356
		1854..	813	529	284
		1855..	1,088	768	320
		1856..	1,066	635	431
		1857..	1,588	1,073	515
	Average of 5 years....		1,088	706	381
	Kolapoor	1853..	5,683	2,972	2,711
		1854..	3,548	1,833	1,715
		1855..	2,438	1,307	1,131
		1856..	2,820	1,418	1,402
		1857..	3,197	1,614	1,583
	Average of 5 years....		3,537	1,829	1,708
	Rutnagherry	1853..	316	169	147
		1854..	455	265	190
		1855..	862	472	390
		1856..	870	484	386
		1857..	971	507	464
	Average of 5 years....		695	380	315
	Vingorla	1853..	167	86	81
		1854..	243	152	91
		1855 .	102	54	48
		1856..	167	99	68
		1857..	202	127	75
	Average of 5 years....		176	103	73
Sind Division	Kurrachee	1853..	308	171	137
		1854..	1,105	764	341
		1855..	1,123	722	401
		1856..	628	400	228
		1857..	651	368	283
	Average of 5 years..		763	485	278

Caste.					Age.		Results.			Percentage of Success.
Hindoos.	Mussulmans.	Christians	Parsees.	Other Castes.	Under one year.	Above one year.	Successful	Unsuccessful.	Doubtful.	
22	39	..	..	..	..	..	25	35	1	41·0
95	122	1	..	..	..	..	194	22	2	89·0
5,227	2,118	..	..	..	..	..	7,046	..	299	95·8
2,951	3,235	..	..	..	..	..	5,830	6	350	94·2
30	8	..	..	..	5	33	28	5	5	73·8
1,665	1,104	½	..	..	..	..	2,624	14	131	78·8
6,342	913	155	..	..	..	..	6,708	639	63	90·5
795	421	74	..	32	..	..	1,280	34	8	96·8
482	63	120	2	..	..	..	617	33	17	92·5
399	129	78	..	..	..	..	568	22	16	93·7
430	66	31	..	..	193	334	479	48	..	90·8
1,690	318	92	⅔	6	..	..	1,930	155	21	92·8
9,763	1,317	2	..	..	..	..	10,417	476	189	94·0
2,047	417	5	1	..	..	..	2,368	33	69	95·8
1,650	156	8	1	..	..	..	1,613	110	92	88·8
1,275	159	10	..	..	..	..	1,238	114	92	85·7
1,389	248	6	..	..	377	1,266	1,500	77	66	91·2
3,225	460	6	⅔	..	..	..	3,427	162	102	91·1
620	261	3	..	..	..	..	741	41	102	83·8
618	195	..	..	..	..	..	675	..	138	83·0
770	305	6	7	..	..	..	908	2	178	83·4
691	375	..	..	..	..	..	838	74	154	78·6
1,322	262	4	..	..	260	1,328	1,387	..	201	87·3
804	281	2	1	..	..	..	910	23	155	83·2
5,378	297	7	..	1	..	..	4,994	304	385	87·8
3,454	85	9	..	..	..	..	3,297	50	201	92·9
2,350	84	4	..	..	..	..	2,228	49	161	91·3
2,778	41	1	..	..	..	..	2,648	41	131	93·9
3,124	73	..	..	..	825	2,372	2,823	101	273	88·3
3,417	116	4	..	½	..	..	3,198	109	230	90·8
307	8	1	..	..	..	..	255	58	3	80·6
418	36	1	..	..	..	..	447	8	..	98·2
832	14	16	..	..	..	..	801	61	..	92·9
813	53	4	..	..	..	..	633	67	170	72·7
735	234	2	..	..	164	807	863	57	51	88·8
621	69	5	..	..	..	..	600	50	45	86·6
159	8	..	..	..	..	..	158	2	7	94·6
171	46	26	..	..	..	..	243	..	..	100·0
67	13	22	..	..	..	..	102	..	..	100·0
92	44	31	..	..	..	..	166	..	1	99·4
163	36	3	..	..	80	122	201	..	1	99·5
131	29	16	..	..	..	..	174	⅔	2	98·7
84	219	3	2	..	..	..	286	22	..	92·8
132	954	17	..	2	..	..	898	158	49	81·2
499	523	94	6	1	..	..	983	70	70	87·5
267	313	31	8	9	..	..	589	4	35	93·7
312	273	59	4	3	498	153	584	39	28	89·7
259	456	42	3	3	..	..	668	59	36	89·0

Divisions and Stations.	Years.	Total Number Vaccinated.	Sex.	
			Males.	Females.
Sind Division — Hydrabad	1853..	493	285	208
	1854..	2,202	1,399	803
	1855..	2,078	1,330	748
	1856..	2,353	1,735	618
	1857..	1,526	914	612
	Average of 5 years....	1,730	1,132	598
Shikarpoor	1853..	25	15	10
	1854..	1,918	1,176	742
	1855..	964	582	382
	1856..	1,547	806	741
	1857..	933	455	478
	Average of 5 years....	1,077	607	470
Kurrachee Dispensary	1853..	104	66	38
	1854..	482	320	162
	1855..	112	66	46
	1856..	120	74	46
	1857..	85	43	42
	Average of 5 years....	181	114	67
Kurrachee Jail Establishment	1857..	74	72	2
Hydrabad Civil H. Establishment	1857..	173	167	6
Meerpore	1853..	120	68	52
	1854..	1,463	857	606
	1855..	239	130	109
	1856..	45	26	19
	1857..	31	16	15
	Average of 5 years....	379	219	160
Mahomed Khan's Tanda.	1853..	13	9	4
	1854..	13	13	..
	1855..	..	..	..
	1856..	125	71	54
	1857..	10	5	5
	Average of 5 years....	32	19	13
Jerruck	1853..	6	2	4
	1854..	77	48	29
	1855..	119	72	47
	1856..	17	2	15
	1857..	261	116	145
	Average of 5 years....	96	48	48
Larkhana	1853..	344	208	136
	1854..	12	11	1
	1855..	135	89	46
	1856..	..	..	..
	1857..	..	..	..
	Average of 5 years....	98	62	36

Caste.					Age.		Result.			Percentage of Success.
Hindoos.	Mussalmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful	Unsuccessful.	Doubtful.	
216	274	3	..	..	..	..	483	10	..	97·9
934	1,268	..	..	..	..	..	1,961	134	107	89·0
844	1,231	3	..	..	..	..	1,937	73	68	93·2
665	1,683	5	..	..	..	..	2,243	108	2	95·3
632	887	6	1	..	797	729	1,313	129	84	86·0
658	1,069	3	½	..	..	..	1,587	91	52	92·3
..	25	..	..	..	..	..	25	..	..	100·0
507	1,401	7	..	3	..	..	1,725	146	47	89·9
611	350	1	..	2	..	..	838	111	15	86·9
984	554	7	..	2	..	..	1,510	37	..	97·6
608	320	5	..	..	771	162	932	1	..	99·8
542	530	4	..	1	..	..	1,006	59	12	94·8
93	11	..	..	..	..	..	97	3	4	93·3
256	222	3	1	..	..	..	438	24	20	90·8
7	99	6	..	..	..	..	99	6	7	88·3
38	82	..	..	..	..	..	80	39	1	66·6
23	43	..	..	19	34	51	28	53	4	32·9
83	92	2	½	4	..	..	149	25	7	74·4
5	68	1	..	..	1	73	25	47	2	33·7
41	131	..	1	..	..	173	162	11	..	93·6
33	87	..	..	..	..	..	88	17	15	73·3
622	841	..	..	..	..	..	1,091	131	241	74·5
75	164	..	..	..	..	..	185	14	40	77·4
18	27	..	..	..	..	..	14	31	..	31·1
..	31	..	..	..	2	29	27	2	2	87·0
149	230	..	..	..	..	..	281	39	59	68·6
1	12	..	..	..	..	..	9	..	4	69·2
..	13	..	..	..	..	..	10	..	3	77·0
..	..	..	..	..	..	..	..	..	..	..
44	81	..	..	..	..	..	121	..	4	96·8
9	1	..	..	..	5	5	10	..	..	100·0
11	21	..	..	..	..	..	30	..	2	68·6
5	..	1	..	..	..	..	5	1	..	83·3
23	54	..	..	..	..	..	77	..	..	100·0
48	71	..	..	..	..	..	89	30	..	74·7
..	17	..	..	..	..	..	17	..	..	100·0
33	228	..	..	..	39	222	259	2	..	99·2
22	74	⅓	..	..	..	..	89	7	..	91·4
234	110	..	..	..	..	..	256	63	25	74·4
..	12	..	..	..	..	..	4	8	..	33·3
49	86	..	..	..	..	..	83	42	10	61·4
..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..
57	41	..	..	..	..	..	69	22	7	33·8

Divisions and Stations.		Years.	Total Number Vaccinated.	Sex.	
				Males.	Females.
Sind Division	Halla	1856	88	57	31
		1857	14	10	4
		Average of 2 years	51	33	18
	Koree	1856	197	94	103
		1857	269	157	112
		Average of 2 years	233	125	108
	Tarooshu	1856	36	25	11
		1857	42	18	24
		Average of 2 years	39	22	17
	Kittee	1855	64	32	32
		1856	....	....	....
		1857	....	....	....
		Average of 3 years	21	11	10
Aden	Aden	1854	887	692	195
		1855	825	646	179
		1856	1,786	1,277	509
		1857	904	714	187
		Average of 4 years	1,099	832	267
Persian Gulf	Bushire	1853	95	41	54
		1854	279	135	144
		1855	382	196	186
		1856	115	59	56
		1857	195	91	104
		Average of 5 years	213	104	109
		Total	1,83,326	1,04,985	78,341

Caste.					Age.		Results.			Percentage of Success.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
23	65	..	..	..	..	..	88	...	..	100·0
3	11	..	..	..	5	9	14	..	..	100·0
13	38	..	..	..	..	..	51	..	..	100·0
117	73	..	..	7	..	..	195	2	..	98·9
138	127	2	..	2	154	115	268	..	1	99·6
127	100	1	..	5	..	..	232	1	..	99·2
17	19	..	..	..	..	..	12	24	..	33·3
28	14	..	..	..	10	32	29	13	..	69·0
23	16	..	..	..	..	..	11	18	..	51·1
6	58	..	..	..	..	..	48	4	12	75·0
..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..
2	19	..	..	..	..	..	16	1	4	25·0
44	781	3	..	59	..	..	866	21	..	97·6
43	767	10	..	5	..	..	825	..	..	100·0
125	1,606	51	..	4	..	..	1,786	..	..	100·0
55	80	40	3	723	41	860	901	..	..	100·0
67	808	26	1	197	..	..	1,094	5	..	99·4
..	83	4	..	8	..	..	88	7	..	92·6
..	258	11	..	10	..	..	265	14	..	94·9
..	358	8	..	16	..	..	380	2	..	99·4
..	106	5	..	4	..	..	69	46	..	60·0
..	177	18	..	..	133	62	144	51	..	73·8
..	196	9	..	8	..	..	189	24	..	84·1
1,37,069	41,138	2,757	598	1,764	..	..	1,64,356	8,559	10,411	448·7

TABLE No. 2 C.

Table showing the Total Number Vaccinated for Five Years at Twenty Civil Stations, at each of which a Vaccinator is allowed, with the Average yearly work of each Vaccinator.

Years.	Total Number Vaccinated.	Sex.		Caste.					Age.		Result.			Percentage of Success.
		Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
1853	45,279	25,774	19,505	38,489	6,251	359	72	108	..	..	39,886	3,043	2,350	88·1
1854	31,492	18,035	13,457	23,163	7,692	386	90	161	..	..	28,343	1,371	1,778	90·0
1855	29,695	17,112	12,583	23,196	5,826	483	181	9	..	..	26,875	1,082	1,738	90·4
1856	28,283	16,388	11,895	20,516	7,097	531	109	30	..	..	25,624	1,005	1,654	90·5
1857	26,767	15,119	11,648	20,196	4,674	473	129	1,295	10,099	16,668	23,852	1,199	1,716	89·1
Total....	161,516	92,428	69,088	125,560	31,540	2,232	581	1,603	..	..	144,580	7,700	9,236	448·1
Average of 5 years.	32,303	18,485	13,818	25,112	6,308	446	116	320	..	..	28,916	1,540	1,847	..
Average each Vaccinator.	1,615	924	691	1,256	315	22	6	16	..	..	1,446	77	92	89·5

TABLE No. 2 D.

Table showing the Total Number Vaccinated for Five Years at Fifteen Stations where no Vaccinator is allowed, with the Average yearly work performed at each Station.

Years.	Total Number Vaccinated.	Sex.		Caste.					Age.		Result.			Percentage of Success.
		Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
1853	1,062	605	457	660	370	12	2	18	..	..	828	158	76	77·9
1854	3,031	1,812	1,219	1,368	1,585	60	4	14	..	..	2,520	217	294	83·1
1855	8,610	4,837	3,773	5,534	2,980	78	2	16	..	..	8,124	102	384	94·3
1856	7,568	4,374	3,194	3,411	3,780	303	5	69	..	..	6,984	190	394	92·2
1857	1,539	929	610	536	883	72	4	44	533	1,006	1,320	192	27	85·7
Total....	21,810	12,557	9,253	11,509	9,598	525	17	161	..	..	19,776	859	1,175	433·2
Average of 5 Years	4,362	2,511	1,851	2,302	1,920	105	3	32	..	..	3,955	172	235	..
Average at each Station per annum.....	290	167	123	153	128	7	..	2	..	..	264	11	15	90·1

TABLE No. 3 A.

Vaccination under Native Chiefs' Agency.

Table showing the Total Number Vaccinated by Vaccinators under Native Chiefs, arranged according to Sex, Caste, Age, and Result, with Percentage of Success, for the Years 1853, 1854, 1855, 1856 *and* 1857, *with an Average of Vaccination for Five Years.*

Years.	Total Number Vaccinated.	Sex.		Caste.					Age.		Result.			Percentage of Success.
		Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
1853	19,986	11,370	8,616	17,585	1,438	120	..	843	..	..	16,442	1,486	2,058	82·2
1854	30,538	17,046	13,492	27,969	2,098	124	..	347	..	..	25,958	1,718	2,862	85·0
1855	45,072	24,164	20,908	41,935	3,047	89	1	..	..	..	38,313	2,580	4,179	85·0
1856	53,663	27,865	25,798	50,087	3,479	95	2	..	..	..	47,293	1,963	4,407	88·1
1857	44,013	22,990	21,023	39,031	3,060	118	16	1,788	13,630	30,383	38,429	2,380	3,204	87·3
Total.....	193,272	103,435	89,837	176,607	13,122	546	19	2,978	..	..	166,435	10,127	16,710	427·6
Average of 5 Years....	38,654	20,687	17,967	35,321	2,624	109	4	596	..	..	33,287	2,025	3,342	86·1

TABLE No. 3 B.

Vaccination under Native Chiefs' Agency.

Table showing the Total Number Vaccinated in each Division by Vaccinators under Native Chiefs, arranged according to Sex, Caste, Age, and Result, with Percentage of Success, for the Years 1853, 1854, 1855, 1856, *and* 1857, *with an Average of Five Years Vaccination in each Division.*

Divisions and Stations.	Years.	Total Number Vaccinated	Sex.		Caste.					Age.		Result.			Percentage of Success.
			Males.	Females.	Hindoos.	Mussalmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
S. Division. Kolapoor, &c.	1853..	6,299	3,957	2,342	5,776	241	..	..	282	..	..	5,093	264	942	80·8
	1854..	5,765	3,569	2,196	5,122	574	..	..	69	..	..	4,783	218	764	82·9
	1855..	7,604	4,126	3,478	7,274	328	2	..	..	..	..	6,481	256	867	85·2
	1856..	9,804	5,263	4,543	9,438	360	8	..	..	..	..	8,842	154	810	90·1
	1857..	8,723	4,621	4,102	8,109	349	..	..	265	2,155	6,568	8,121	213	389	93·1
	Average of 5 years..	7,639	4,307	3,332	7,144	370	2	..	123	..	..	6,664	221	754	86·4
W. Guzerat. Mahee Kanta	1853..	6,913	3,778	3,135	5,628	724	..	..	561	..	..	5,678	540	695	82·1
	1854..	12,008	6,434	5,574	11,051	826	..	..	131	..	..	9,979	648	1,381	83·1
	1855..	22,595	11,796	10,799	21,053	1,542	..	..	..	..	..	19,612	917	2,066	86·7
	1856..	30,172	15,436	14,716	27,620	2,532	..	..	..	..	..	26,340	911	2,901	87·3
	1857..	15,289	8,065	7,224	12,625	1,264	..	..	1,400	6,286	9,003	13,565	548	1,176	88·7
	Average of 5 years..	17,391	9,102	8,289	15,595	1,378	..	..	418	..	..	15,035	713	1,643	85·6
E. Guzerat. Baroda & Rewa Kanta.	1853..	2,527	1,445	1,082	2,262	252	13	..	..	..	..	1,792	327	408	71·0
	1854..	6,072	3,721	2,351	5,375	545	5	..	147	..	..	4,926	490	656	81·1
	1855..	9,308	5,466	3,842	8,423	884	..	1	..	..	..	7,258	1,037	1,013	77·9
	1856..	6,742	3,726	3,016	6,244	496	..	2	..	..	..	5,945	429	368	88·1
	1857..	7,756	4,057	3,699	6,978	686	2	16	74	1,799	5,957	6,326	691	739	81·5
	Average of 5 years..	6,481	3,683	2,798	5,857	572	4	4	44	..	..	5,249	597	637	79·9

Divisions and Stations.	Years.	Total Number Vaccinated	Sex.		Caste.					Age.		Result.			Percentage of Success.
			Males.	Females.	Hindoos.	Mussalmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
N. Deccan. Peint (Nassick)	1854..	30	17	13	15	15	..	..	..	..	..	19	1	10	63·3
	1855..	890	439	451	890	..	..	..	..	..	..	776	47	67	87·2
	1856..	325	169	156	325	..	..	..	..	..	..	247	33	45	76·0
	1857..	305	138	167	305	..	..	..	..	37	268	253	17	35	83·0
	Average of 4 years..	387	191	196	383	4	..	..	..	..	..	324	24	39	77·4
S. Deccan. Sawunt Warree	1853..	4,247	2,190	2,057	3,919	221	107	..	..	..	..	3,879	355	13	913
	1854..	6,663	3,305	3,358	6,406	138	119	..	..	..	..	6,251	361	51	93·8
	1855..	4,675	2,337	2,338	4,295	293	87	..	..	..	..	4,186	323	166	89·5
	1856..	6,638	3,271	3,367	6,460	91	87	..	..	..	..	5,919	436	283	89·1
	1857..	6,102	3,073	3,029	5,844	142	116	..	..	811	5,291	5,000	664	438	81·9
	Average of 5 years..	5,665	2,835	2,830	5,385	177	103	..	..	..	..	5,047	428	190	89·1
Kattywar. Rajcote	1857.	5,838	3,036	2,802	5,170	619	..	..	49	2,542	3,296	5,164	247	427	88·4
	Total....	193,272	103,435	89,837	176,607	13,122	546	19	2,978	..	..	166,435	10,127	16,710	427·6

TABLE No. 4 A.

General Abstract of Vaccination.

Table showing the Total Number Vaccinated each year by all Establishments, arranged according to Sex, Caste, Age, and Result, with Percentage of Success, for the Years 1853, 1854, 1855, 1856, *and* 1857, *with an Average of Vaccination for Five Years.*

Years.	Total Number Vaccinated.	Sex.		Caste.					Age.		Result.			Percentage of Success.
		Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
1853	180,916	101,703	79,214	150,438	21,354	2,088	430	6,606	..	..	154,510	14,592	11,814	85·4
1854	234,292	132,132	102,160	188,232	40,151	1,529	299	4,081	..	..	206,168	10,752	17,372	87·9
1855	259,766	142,783	116,983	219,671	37,444	2,059	532	60	..	..	232,644	9,072	18,050	89·5
1856	247,749	134,477	113,272	208,680	35,754	2,871	326	118	..	..	224,470	8,309	14,970	90·6
1857	246,687	136,027	110,660	184,107	51,940	1,969	357	8,314	75,180	171,507	226,003	8,355	12,329	91·6
Total....	1,169,410	647,121	522,289	951,128	186,643	10,516	1,944	19,179	..	..	1,043,795	51,080	74,535	445·0
Average of 5 Years	233,882	129,424	104,458	190,226	37,328	2,103	389	3,836	..	..	208,759	10,216	14,907	89·0

TABLE No. 4 B.

General Abstract of Vaccination.

Table showing the Total Number Vaccinated for Five Years by each Establishment, arranged according to Sex, Caste, Age, and Result, and the Average total work of each Establishment for Five Years.

Establishments.	Total Number Vaccinated Five Years.	Sex.		Caste.					Age.		Result.			Percentage of Success.
		Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.	
1. Vaccination under Superintendents	792,812	438,701	354,111	637,452	132,383	7,213	1,327	14,437	..	..	713,004	32,394	47,414	89·9
2. Do. Civil Surgeon & others.	183,326	104,985	78,341	137,069	41,138	2,757	598	1,764	..	..	164,356	8,559	10,411	89·7
3. Do. by the Native Chiefs' Agency.....	193,272	103,435	89,837	176,607	13,122	546	19	2,978	..	..	166,435	10,127	16,710	86·1
Total....	1,169,410	647,121	522,289	951,128	186,643	10,516	1,944	19,178	..	..	1,043,795	51,080	74,535	265·6
Average of the Establishments....	389,803	215,707	174,096	317,043	62,214	3,505	648	6,393	..	..	347,932	17,026	24,845	89·0

1857.—TABLE OF AGES.

Vaccination in 1857, arranged according to Ages, whether performed under or above One Year of Age.

Establishments, &c.	Age.		Difference.		Total Vaccinated.
	Under one year.	Above one year.	Under.	Above.	
I Superintendents	50,918	123,450	..	72,532	174,368
II Civil Surgeons and others	10,607	17,631	..	7,024	28,238
III Native Chiefs' Agency	13,630	30,383	..	16,753	44,013
Total	75,155	171,464	..	96,309	246,619
I— *Superintendents.*					
Presidency Division	4,044	2,703	1,341	..	6,747
Concan „	5,689	28,067	..	22,378	33,756
Northern Deccan „	3,651	16,912	..	13,261	20,563
Southern „ „	3,991	11,541	..	7,550	15,532
Western Guzerat „	15,143	13,714	1,429	..	28,857
Eastern „ „	4,759	20,804	..	16,045	25,563
Sind „	12,863	27,914	..	15,051	40,777
Kattywar Circle „	778	1,795	..	1,017	2,573
II— *Civil Surgeons and others.*					
Tannah	60	194	..	134	254
Alibaugh	23	46	..	23	69
Bandora	42	34	8	..	76
Poona	529	1,163	..	634	1,692
Sattara	560	673	..	113	1,233
Ahmednuggur	93	1,019	..	926	1,112
Nassick	899	533	366	..	1,432
Dhoolia	659	265	394	..	924
Ahmedabad	1,292	1,490	..	198	2,782
Kaira	483	965	..	482	1,448
Rajcote	195	329	..	134	524
Surat	596	1,298	..	702	1,894
Broach	807	728	79	..	1,535
Bhooj	5	33	..	28	38
Belgaum	193	334	..	141	527
Dharwar	377	1,266	..	889	1,643
Sholapoor	260	1,328	..	1,068	1,588
Kolapoor	825	2,372	..	1,547	3,197
Rutnagherry	164	807	..	643	971
Vingorla	80	122	..	42	202
Kurrachee	498	153	345	..	651
Hyderabad	797	729	68	..	1,526
Shikarpoor	771	162	609	..	933
Kurrachee Dispensary	9	8	1	..	17
Ditto Jail Establishment	1	73	..	72	74
Hyderabad Civil Hospital Establishment	..	173	..	173	173
Meerpoor	2	29	..	27	31
Mahomed Khan's Tanda	5	5	..	..	10
Jerruck	39	222	..	183	261
Halla	5	9	..	4	14
Roree	154	115	39	..	269
Taroosha	10	32	..	22	42
Aden	41	860	..	819	901
Bushire	133	62	71	..	195
III—*Native Chiefs' Agency.*					
Kolapoor, &c.	2,155	6,568	..	4,413	8,723
Mahee Kanta	6,286	9,003	..	2,717	15,289
Rewa Kanta	1,799	5,957	..	4,158	7,756
Peint (Nassick)	37	268	..	231	305
Sawunt Waree	811	5,291	..	4,480	6,102
Rajcote, &c.	2,542	3,296	..	754	5,838

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR THE YEARS 1858 AND 1859.

Bombay:
PRINTED FOR GOVERNMENT
AT THE
EDUCATION SOCIETY'S PRESS, BYCULLA.

1861.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR 1858 AND 1859.

No. 2673 OF 1860.

From the PRINCIPAL INSPECTOR-GENERAL, Medical Department,

To the SECRETARY to GOVERNMENT, General Department.

SIR,—By my letter, No. 2427 of 9th October 1858, I had the honor to submit to Government the Annual Report of Vaccination for the years 1856 and 1857, for transmission to the Home Government, and by your predecessor's letter, No. 2756 of 12th November 1858, it was intimated that the Report was approved by Government, and ordered to be distributed in the usual manner.

2. I have now the honor to submit a Report for the years 1858 and 1859, with a similar object in view, and to explain that the very considerable delay in presenting the Report in a printed form, as directed under former instructions, has arisen from the Government Printing Press having been employed during the last few months upon more urgent business.

3. The practice of framing a single report of the vaccination operations for two years was, for the first time, introduced in 1858, owing to the pressing calls upon my time during the years since 1857, and is repeated on the present occasion for a similar reason. I trust, however, that henceforth circumstances will permit of an Annual Report being drawn up, although, by combining the figures and results of two years, a considerable saving is effected in type and in matter.

4. With these observations, I proceed to review the state of Vaccination in the Bombay Presidency during the years 1858 and 1859, explaining that, although I have been favoured by Deputy Inspectors-General

of Hospitals with their separate Divisional Reports, I have not considered it necessary to publish them, preferring to allow the working of the Department to be judged of by the reports of the medical officers who are engaged in vaccination. But with respect to the subjoined reports of Superintendents and Civil Surgeons, it should be understood that they are only selections from the original reports, condensed and arranged with the object of economising space, and avoiding unnecessary prolixity. * I trust, however, that they will be found sufficiently interesting to merit an attentive perusal.

5. In the year 1858, there were 257,567 vaccinations performed throughout the Bombay Presidency by the agency mentioned in detail in the Appendix [see Table No. 4.] In the year 1859 the number recorded is 252,760, being higher than in either of the years 1857 or 1856, when 246,687 and 247,749 were the numbers respectively shown.

6. The average percentage of successful vaccinations in each of these years stood as follows:—
[1856—90·6,] [1857—91·6,] [1858—91·0,] [1859—91·2;] that is about one failure occurred in every ten operations, which, if the returns are strictly trustworthy, proves that the lymph employed has suffered no deterioration, and that the operations have been properly performed.

7. In the absence of statistics of population and of a registration of births, it is impossible to judge whether the annual average of about 250,000 vaccinations in the Bombay Presidency and Sind is in just proportion to the requirements of the country. The numbers, however, have never been exceeded, except in 1855, when nearly 260,000 vaccinations were recorded.

8. But according to the tables in former and present reports, it appears that the largest number of those who were protected from Small-pox by vaccination having proved "*successful*" was in 1858, when 234,500 persons were considered to have received the prophylactic in a manner to ensure their future immunity from Small-pox; whilst the average protection for some years appears to have been about 230,000; that is to say, out of the 250,000 operations performed 20,000 failed.

9. It is extremely doubtful whether too much stress is not laid upon the necessity of showing large numbers, and whether it does not lead, in many instances, to fictitious names being entered on the registers, and thence onward to erroneous statistics and conclusions.

10. The ground-work upon which the whole fabric of Vaccination rests is the trustworthiness of the agents employed; and in spite of the most elaborate and carefully executed system of check, there are many

occasions when false returns can be rendered. During the last two years, I regret to say that four Vaccinators have been dismissed from the Service for falsification of returns, and others have received less severe punishment.

11. Under the eye of a vigilant Superintendent of a Division, it rarely happens that any system of deception can be kept up for a lengthened time, and the utility of European supervision is no where so apparent as in counteracting the tendency which many Native Vaccinators indulge in, of exaggerating either the number or the success of their operations.

12. The large extent of territory, *viz.* the whole of Western India and Sind, being divided into only *seven* Divisions,* renders it almost impossible for the Superintendent of each Division to exercise a greater or more efficient control than at present; whilst the eight months of fair season does not suffice to permit him to travel over the portion of the country committed to his care, and to inspect thoroughly the progress of Vaccination therein.

13. The periodical visitation of the Superintendent is an immense stimulus to the flagging energies of a Native Vaccinator; whilst the careful scrutiny of the work performed, and the rigid examination and inquiries instituted, forbid prolonged deception, and render the present system of conducting Vaccination in the Bombay Presidency almost as perfect as can be devised.

14. It will be seen by the tables that, out of the total number vaccinated in each year, by far the largest proportion of the work was performed under Superintendents; thus, in 1858 there were 183,486 out of about 250,000 persons vaccinated, *i. e.* in the proportion of 71·2 per cent.; and in 1859 there were nearly 178,000 out of about 250,000, or in the proportion of 70 3 per cent. The next largest sphere of conducting Vaccination operations is through the agency of the Native Chiefs, and about 28,000 individuals annually receive the benefit of Vaccination through the liberality of the Chieftains, Jageerdhars, &c. of Western India, and that in the remotest and wildest parts of the country. The smallest number vaccinated is under Civil Surgeons in the chief sudder stations. Civil Surgeons, however, have only a very limited establishment, viz. one Vaccinator allowed to each, or a total of twenty, as will be seen by reference to Table No. 2 in the Appendix. At many places, however, there are no special agents, as will be also seen by reference to the same table, and much credit is therefore due to the medical officers and subordinates who thus assiduously prosecute Vaccination. The

* The Presidency town of Bombay not included.

number of Native Vaccinators employed by the Native Chiefs under the direction of the Superintendents of Vaccination was, in 1858 fifty-two, and in 1859 sixty-five, the increase being due to the enlargement of the Kattywar Circle. The number of Native Vaccinators directly under Superintendents was, in 1858 one hundred and nineteen, and in 1859 one hundred and twelve, the diminution arising from the introduction of the new system under which Vaccination in the Presidency town of Bombay is conducted.

15. By reference to Table No. 1 in the Appendix, the specific work performed by each Superintendent can be traced ; and it will be observed that in 1858 a very large increase took place in the Concan Division—upwards of 12,000 over the previous year,—and that it fell again by half that number in the following year, 1859.

16. Dr. Beatty, the energetic Superintendent of that Division, attributes the increase partly " to the stimulus which the newly-proposed system of payment by percentage has created amongst the Vaccinators." *See* page 6* of the Superintendent's Report.

17. During 1857 and 1858, at the urgent solicitation of Dr. Beatty, Government was pleased to sanction, as an experimental measure, a plan of rewarding Native Vaccinators for work performed above an average number, and Dr. Beatty adopted an ingenious method of guaranteeing that the operation had been really performed, by issuing certificates arranged like a banker's cheque-book to that effect, on coloured paper, to each individual operated on.

18. These receipts were afterwards collected and compared with the counterpart left in the book, and were numbered and registered accordingly. The system had a fair trial for nearly two whole seasons, and was vigorously prosecuted by its author ; but it was found to be cumbersome in practice ; to involve additional labour and expense ; to necessitate the Superintendent himself seeing that every child was properly registered ; and was not free from the imputation that it was a premium to render exaggerated reports and returns. It was finally abandoned after certain of the Vaccinators had been remunerated, as promised, for their increased exertions. The whole correspondence was laid before Government separately.

19. In 1858 there was an increase in the Sind Division of upwards of 6,000 vaccinated, and the next year this augmentation was followed up by a still further increase of upwards of 2,000. Ever since the appointment of Assistant Surgeon Martin to the superintendency of Vacci-

* In the foot-note it is stated the subject is noticed in another place, referring to the present observations.

nation in Sind, there has been a great and steady augmentation, as will be seen by the Table on the margin at page 26 of the Report for 1858, but which does not include the still larger returns for 1859. There can be no doubt that Dr. Martin has gained the confidence of the people, and is entitled to great praise.

20. With the exception of Sind, there is a perceptible falling off under the other Superintendents. It is true that an increase is shown in Eastern Guzerat,* but this is only when compared with the previous year, in which there was a diminution of upwards of 5,000. In the Western Guzerat Division† the numbers were diminished by 8,000 in 1858. Only about 20,000 persons were vaccinated in that Division each year.

* Superintendent. Assistant Surgeon Ross.

† Superintendent. Assistant Surgeon Thorpe.

21. Various reasons are assigned by the Superintendents for a diminution of numbers; and the most common and influential causes are sickness amongst the Establishment, and the prevalence of cholera amongst the inhabitants of the country.

22. Another reputed cause is the absence of Small-pox from the neighbourhood; and it seems a well-established fact that, when Small-pox is prevailing in any locality, the people readily and willingly receive Vaccination.

23. A perusal of the subjoined Reports will show that much of the distaste for Vaccination arises from apathy and indifference on the part of the people; but it is very doubtful whether more general success than at present attends the spread of Vaccination could be expected under the circumstances in which the prophylactic is introduced into this country, and whether there is not almost an equal neglect of the practice in all parts of the world.

24. The principal difficulty to be overcome is the great repugnance entertained to lymph being removed from the arm on the seventh or eighth day, for the purpose of propagating the virus to others; but this prejudice is not confined to the uneducated natives of Western India, or to the illiterate inhabitants of any country; it is shared by many whose social position here and elsewhere would, it might be supposed, elevate them above such prejudices. To a certain degree, however, it is only an exaggerated form of the natural instinct for the preservation of their offspring, inherent in all, although carried in this country to a prejudicial extent.

25. The statistics exhibited in the Tables in the Appendix, relative to "*sex*" and "*age*," are interesting in some measure; thus, the proportion per

cent. of the total vaccinated in 1858 was about 55 males to 45 females, and in 1859 about 54·5 males to 45·5 females; whilst as regards "*age*" in 1858, out of 100 vaccinated there were about 32 under one year of age, and 68 above that period; and in 1859 there were nearly 33 under one year and 67 above that age, demonstrating that, in the year 1859, some slight progress was made in prosecuting Vaccination at an earlier period of life, and in the female sex, than in the year 1858. Full details, with respect to age, will be found in the last Table in the Appendix.

26. Amongst the general subjects connected with Vaccination in 1858, mention must be made of the exertions of Dr. Morehead, when acting as Superintending Surgeon, Poona, to introduce a more thorough system of Vaccination into the Military Bazars and Regimental Lines. Although this is not the place to enter at length into the subject, yet there can be no doubt, I think, that the diminished mortality from Small-pox in 1859 compared to 1858, as shown in the Table at the end, is due, in a great measure, to the introduction of this useful measure, and to the zeal with which it was carried out. At every large military station a Vaccinator was placed under the Staff Surgeon or Senior Medical Officer, for the purpose of vaccinating in the Military Bazars; and although these agents have been withdrawn from several of the stations, they are kept up with great advantage at Poona and the stations in Rajpootana.

27. During the year 1858 attention was given to two subjects brought before Government—the utility of "Magnetized needles" for Vaccination; and "obtaining vaccine matter direct from the cow,"—in order to keep up a supply of genuine lymph. On the former subject the reports were altogether unfavourable, and on the latter I now produce, for permanent record, the report I then submitted:—

ON THE QUESTION OF INOCULATING COWS IN THIS COUNTRY WITH VACCINE MATTER BROUGHT FROM EUROPE, WITH THE VIEW OF OBTAINING FRESH VACCINE LYMPH.

1. *If Cows in this country have been observed to be naturally subject to Cow-pox.*—On this point there is not much information with respect to Western India, and the records of the late Medical Board do not throw any light on the question. Had the fact of cows being subject to cow-pox naturally been observed in the Bombay Presidency, it doubtlessly would have been recorded. A disease amongst cows in Bengal of a variolous nature has been long known; and in the Report of Vaccination in Bengal, from 1827 to 1844, by Dr. Stewart, the second part is devoted to a notice of the various forms of epizootic disease amongst cows. There is a description of the vaccine disease, or the cow-pox, among the cattle of the town of Moorshedabad in 1832, by Dr. McPherson, and his successful employment and distribution of this lymph throughout India. Although some doubt is thrown on the genuineness of the lymph

thus obtained, from the circumstance that only one successful case ensued from the crust taken from the cow, and that fresh lymph from the pustules which arose upon the cows was always unsuccessful; and hence, to all who have had much dealings with the natives of India, this fact is sufficiently suggestive; yet it is stated "the superiority of the lymph derived from this source was proved beyond doubt, and the natives appeared to place great confidence in it." In the same report the supposed discovery of genuine cow-pox amongst the cows of Assam is recorded, where several native children were vaccinated from the lymph obtained from scabs on the back of a cow affected with "Mutha," and no doubts of the genuineness of the lymph were excited until two English children were operated on, when it was found small-pox, and not cow-pox, supervened in both cases. It is stated "this was more than suspected to have happened in many of the native children who had generally dispersed a few days after the operation, and were not again heard of." As there are many spurious forms of cow-pox amongst cows, it is a matter of first consequence, if circumstances render it necessary to draw a fresh supply of virus from the cow in order to induce protection of the vaccinated, that the most accurate distinction should be made between the genuine and spurious forms; and this is rendered the more difficulty as the true and false diseases may be prevalent at the same time. It is acknowledged by the English physicians at the present day that, from the great variety of affections in the cow, and the few opportunities of acquiring a practical knowledge of the subject, the most prudent plan, supposing it is deemed expedient to renew our supply of lymph, is to produce the disease in the cow by inoculation.

2. *Whether it is advisable to try here the experiment of inoculating Cows with vaccine matter brought from Europe, with the view of obtaining fresh vaccine lymph.*— This is called "*Retro-vaccination,*" or the artificial communication of cow-pox to the cow from the human subject. The only late instance on record in the Medical Board Office was by Dr. Cotes, Staff Surgeon of Neemuch, when in charge of Artillery there in 1855, who, after mentioning that it was difficult to maintain Vaccination in that part of Rajpootana, states "After some failures the introduction of lymph sent direct from Germany was followed in August last (1855) by complete success. The lymph arrived in a fluid condition, having been carefully preserved in a small glass-tube, hermetically sealed, and fitted closely in a quill. Two successful cases resulted, and the virus from one child was re-transmitted through a cow, with the view of obtaining, as it was supposed, a more energetic quality of lymph. These expectations were not disappointed, and the children of those belonging to the Company of the Artillery (Golundauze) were vaccinated from the virus obtained through this source, and the pustules in most instances were 'large, full, with well-defined and raised margins, and of a pure hue.'" The objects had in view in retro-vaccination have been many, and have found advocates and opponents at different times. Some writers have argued that the quality of the lymph is improved; others have maintained that it is deteriorated by the process; but practically speaking, the only useful object of retro-vaccination is to increase the supply of vaccine matter. It is contended by the Germans, that the process of retro-vaccination has the effect of renewing the efficiency of lymph supposed to be impaired by repeated transmission through the human subject; but it is denied by nearly all the best writers and observers, that vaccine lymph does suffer any deterioration by being propagated and transmitted from one

human subject to another. But even if the deterioration was admitted as a fact, it does not appear how the process of retro-vaccination could restore its efficacy; and whatever its original qualities were, it is not unreasonable to suppose they would be neither better nor worse for its transmission through the cow. In Dr. Cotes' case, there can be no doubt that the lymph was as powerful before it passed through the cow as afterwards, and that, had children been vaccinated with the German lymph on its arrival, the vesicle would have been as perfect as those he describes. Mr. Sub-Assistant Surgeon Anunta Chundroba has informed the Director-General that he is of opinion that, if Hindoos were aware that vaccine lymph, obtained from the cow by retro-vaccination, was produced by the insertion of matter by means of a lancet into the udder, they would think that the same process would be resorted to always, and would, he thinks, decidedly object to cows being so treated, and, moreover, object to the matter so obtained, because, in their estimation, the cow had been injured. He states that it is the insertion of the matter by means of a lancet, and the probability of a minute drop of blood being drawn from the cow, which is the objection in their eyes.

3. *Whether inoculation of Cows with the matter of human Small-pox gives them a disease not to be distinguished from the real Cow-pox.*—This is no new discovery. It was first practised in 1831 by Dr. Sonderland of Bremen; subsequently by Russian physicians; and lastly by Mr. Ceely of Aylesbury, who in 1839, after various failures, succeeded in establishing the genuine cow-pox, named by him *variola vaccina*. "Mr. Ceely inoculated a heifer with human small-pox by eight punctures. On the fifth day four of the punctures were large and elevated; the other four were less so. On the sixth day all presented the appearance of the genuine vaccine vesicle, from one of which lymph was taken on the sixth, eighth, ninth, and tenth days, which, being inserted into the arms of children, produced, especially that of the eighth day, the true vaccine vesicle. Many hundred children were vaccinated from this source." The mode adopted at first was to wrap round the body of the cow blankets or other covering of the bed on which a patient had just died of small-pox; but it more often failed than succeeded, and insertion of the cow-pox matter (inoculation) was substituted. Mr. Ceely's experiments succeeded in two instances after many previous fruitless trials, and the lymph thus obtained was propagated throughout England. With reference to lymph so obtained, it has been asserted, but by no means satisfactorily demonstrated, that it is more effective than the stock which has been long in use, and which has been alleged to become weakened by transmission through numerous subjects. That form of lymph obtained by direct inoculation of the cow with small-pox has been found to act successfully, and in some cases too energetically when communicated to man. It is alleged that more severe constitutional symptoms are produced by lymph taken directly from the cow; and those who hold that febrile irritation is a measure of the due effect of this virus on the system, will, of course, give it the preference. But many competent observers have adjudged the superiority of the human lymph as more mild, equally sure, and, at the same time, entailing fewer accidents.

In conclusion, the Director-General begs to state that his opinion is unfavourable to experiments being made with vaccine lymph in this country. It is of the first importance that no doubt should exist as to the purity of the matter employed, and he is averse to employing such as may be procured from the natural disease in the cow in

India, or produced artificially by the inoculation of the animal by either cow or small pox. The Director-General has no hesitation in expressing his conviction, that the employment of lymph obtained from Europe is the best means of propagating Vaccination, and supplies from the Honorable Court (overland) in June, July, and August, the Director-General considers will suffice.

28. In 1858 attention was directed to the importance of Convicts to the Straits Settlements being duly protected by vaccination, and the following extract from a despatch from the late Honorable Court was communicated for information and guidance :—

"We observe that orders for vaccinating Convicts under sentence of transportation have been issued by all the local Governments except that of Bombay, which is prepared to adopt the same course with the approval of the Government of India. We think that you should take an early opportunity of issuing instructions on the subject to the Government of Bombay."

29. During 1859 a despatch from the Secretary of State, relative to rendering Vaccination compulsory previous to admission to Government schools was received, of which the following is a copy :—

"You were informed in paragraph 47 of the Court's despatch, dated 22nd July (No. 41) 1857, that the Home Authorities were not prepared to sanction a rule making Vaccination a necessary condition of admission to the public service. The proposal to require all children to be vaccinated before they can be admitted to a Government school is equally opposed to the principles hitherto acted on—of trusting for the spread of Vaccination to measures of persuasion and encouragement; and it is open to the still further objection that it would be likely to add to the unpopularity of the Government schools. It is necessary therefore that the idea of insisting on such a condition be at once relinquished."

30. During this year an endeavour was made to introduce Vaccination into the dominions of His Highness the Sultan of Muscat, but the experiment was not successful.

I have the honor to be,
Sir,
Your most obedient Servant,

B. P. ROOKE, M.D.,
Principal Inspector-General,
Medical Department.

Bombay, 5th December 1860.

INDEX TO THE FOLLOWING REPORTS.

PAGE

VACCINATION UNDER SUPERINTENDENTS—

Presidency Division—1858 and 1859 1
Concan do. do. 6
Northern Deccan do. do. 12
Southern Deccan do. do. 16
Eastern Division, Guzerat do. 20
Western Division, Guzerat do. 22
Sind Division do. 26

VACCINATION IN THE NATIVE STATES—

Southern Deccan Division—1858 and 1859 30
Eastern Guzerat do. 31
Western Guzerat do. 32
Kattywar Circle do. 33
Sawunt Warree do. 38
Bhooj, Warree do. 39
Peint (Nassick) do. 40

VACCINATION UNDER CIVIL SURGEONS—

PAGE

Tanna 40
Poona 41
Ahmednuggur 41
Sattara 42
Sholapore 43
Dhoolia 45
Nassick 46
Ahmedabad 46
Concan 47
Rajcote 48
Surat 49
Broach 50
Belgaum 51
Dharwar 52
Kolapore 53
Rutnagherry 54
Kurrachee.. 55
Hydrabad.. 56
Shikarpoor 57
Aden 57
Mahableshwur 58
Alibaugh 59
Vingorla 60
Bushire 60

APPENDIX—

Vaccination under Superintendents .. .. .. Table No. 1
Do. do. Civil Surgeons .. .. No. 2
Do. do. Native Chiefs .. .. No. 3
General Abstract of Vaccination.. .. .. No. 4
Table of Small-pox .. .. No. 5
Table of Ages.. .. .. No. 6

VACCINATION UNDER SUPERINTENDENTS.

PRESIDENCY DIVISION.

Local Superintendent.—Sub-Assistant Surgeon Anunta Chundroba.

Establishment.—Three Vaccinators, and seven Peons.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	8,709	1,962	....	6,996	80·3
1859....	7,999	....	710	6,532	81·6

The operations are entirely confined to the Islands of Bombay and Colaba.

REPORT FOR 1858.

THE new scheme of Vaccination of Bombay was commenced on the 1st October 1858; the Report of that year therefore only embraces the last three months. The following are the Rules published in the *Government Gazette* of 1st December 1858:—

Rules.

1. The charge of the Vaccination Department in the Island of Bombay is entrusted to a Native Sub-Assistant Surgeon, under the designation of "Local Superintendent of Vaccination."

2. The Local Superintendent will have the benefit of the advice and counsel of an "Honorary Inspector," but he will himself conduct the correspondence, and will be solely responsible for the working of the Department.

3. The Honorary Inspector will tender to the Local Superintendent such advice and assistance as he may deem requisite, and will bring to the notice of the proper authorities any neglect or irregularity in the performance of the duties of the Department of which he may become cognisant.

4. The Records of the Local Superintendent's Office will be at all times open to the examination of the Honorary Inspector.

5. The Establishment is fixed as follows:—

1 Local Superintendent. 6 Assistant Vaccinators.

7 Peons.

6. Until further orders, Vaccination will be gratuitously performed between the hours of 10 and 1 o'clock, in the undermentioned Districts:—

Byculla .....Monday.	Fort.....Thursday.
Mandavee .....Tuesday.	Colaba.....Friday.
Dhobee Tulao.....Wednesday.	Girgaum .....Saturday.

NOTE.—Full details will be found in the Tables at the end relating to 'Sex,' 'Caste,' 'Age,' 'Result,' &c.

7. European children, and the children of Native gentlemen, will be vaccinated at the central Station at Byculla, between the hours of 7 and 9 o'clock, on Monday mornings.

8. The Local Superintendent will be engaged for three hours daily at a Station, and will observe the utmost regularity in the hours of attendance.

9. In the event of the Local Superintendent being prevented by temporary illness from attending to his duties, he will procure the services of a duly qualified Medical Practitioner; but in that case, the attendance will be limited to the time absolutely required to perform the daily duties.

10. As there is a great uncertainty whether or not the children vaccinated will be brought for inspection after Vaccination, it becomes, in the highest degree, important that the operation should be performed with such care and skill as to ensure its success, except in cases of an unusual nature. The Local Superintendent will therefore himself vaccinate as many as possible of the children brought to the Station. He will always vaccinate directly from a child, and will be scrupulously careful in the selection of the vesicle from which lymph is taken.

11. Domiciliary Vaccination from glasses, points, or crusts, is strictly prohibited.

12. The practice of sending vaccinated children to supply lymph to the houses of European or Native residents having been abolished, is on no account to be revived; but every facility will be afforded to persons desirous of entering into a pecuniary arrangement with the parents of vaccinated children, to secure their attendance for the purpose stated. It must, however, be distinctly understood, that the Vaccination Establishment will take no part in such arrangement, and neither the Assistant Vaccinators, nor the Vaccinators' Peons, are to accompany such children.

13. A Division of the Island will be allotted to each Assistant Vaccinator, who must reside within its limits.

14. It will be the duty of the Assistant Vaccinator to visit as many as possible of the houses in which children who have been vaccinated live; to bring to the notice of the Local Superintendent every instance of failure or of irregularity in the progress of the vesicle; and to make himself acquainted, so far as may be practicable, with the number and residences of the children in his Division who have not been vaccinated.

15. Whenever the number of children vaccinated in any one year shall exceed 8,000, a percentage of 10 Rupees per 100 upon all the successful cases in excess of that number will be allowed. Of this sum, one-third shall be received by the person by whom the operation has been successfully performed; the remainder will be equally divided amongst the members of the Establishment.

REPORT FOR 1859.

On the 31st of December 1859, the first complete year of vaccine operations, according to the scheme proposed by Dr. Peet, terminated. His main proposition was to abolish domiciliary Vaccination, and in its stead to establish vaccinating Stations and Depôts in different parts of the Island, where children could be vaccinated by a duly qualified Medical man, with matter taken directly from the arm of a successfully vaccinated child, thus securing, as much as possible, the success of the operation performed—a step rendered the more necessary, as the probablity of seeing children after being vaccinated was small, and the chances of the children being brought to be re-vaccinated, when the first operations had failed, very few.

I was appointed Local Superintendent of the Department, and the duties of Vaccination were made over to me, on the 1st of October 1858. I must freely confess that, when I first made myself acquainted with the nature of the proposed scheme, I entertained grave doubts

as to my ability, successfully, to carry it out, more especially as I was aware of the fact, that the unceasing exertions of some of the ablest and most pains-taking members of the Medical Department, through a period of nearly half-a-century, have not been sufficient to achieve much in the propagation of this best of God's boons in the Town and Island of Bombay. As proposed in the scheme, six Stations were opened in different parts of the Island; and as the several Charitable Dispensaries' of Bombay were fortunately conveniently placed with reference to the different localities, it was thought advisable to secure them for vaccinating Stations. Thus, one was established at the Nag-Davee Charitable Dispensary, situated in a thickly-populated part of the Island between Mambadavee and Mandavee; another at Girgaum, on the premises of the Shunkersett Charitable Dispensary, so as to be conveniently placed for the residents of Mahaluxumee, Malabar Hill, Girgaum, &c.; a third at Lower Colaba, in the Branch Charitable Dispensary there situated; the fourth in the Fort, at the Fort Gratuitous Dispensary, in the Bazar Gate Street. The original Station at the gate of the Jamsetjee Jejeebhoy Hospital, together with the four above noticed, formed five Stations in all. There was thus one more to be established in the south-western part of the Town; and as there was no conveniently-placed Charitable Dispensary near, Mr. Lisboa—a Graduate of the Grant Medical College—offered us the use of the veranda of his house, which we thankfully accepted, as the place was very conveniently situated between the Dhobee Tank and Kalcadavee districts, on the Pallar Road. In selecting the Dispensaries as Stations, we had another and a very important object in view, viz. that of ultimately making them over in working order to the Medical attendants of the Dispensaries, so as to enable them to carry on, with comparative ease, vaccine operations. After the establishment of the six Stations, it was a question how we should proceed to work with them—whether to attend continuously at one Station only for a length of time, till all the persons in the particular district were vaccinated, or to allot one day of the week to each Station. On consideration, the latter plan was adopted, because Vaccination could thus be extended over the greatest part of the Island in the shortest time, and the centres for the supply of vaccine lymph multiplied, so as to enable us, in case of the supply failing at any one Station, to fall back on the others. The experience of the past fifteen months has fully proved the utility of the plan. The hours of attendance for Vaccination were, in the first instance, fixed from 10 A.M. to 1 P.M. But it was found necessary to change the hours to from 8 to 11 A.M.

There were formerly, in connection with the Department, ten Vaccinators, who were, for the most part, employed in vaccinating children at their own houses. As under the new system, domiciliary Vaccination was abolished, and as all the operations even at the Stations were to be performed by the Superintendent himself, the number was, in the first instance, reduced to six,—one being placed in charge of each Station. A part of the scheme Dr. Peet had proposed was the reduction of the Vaccination Staff to three, which number he thought was sufficient for the work required of them; but the superoir authorities deemed it requisite to retain in the Department six Vaccinators, so as to allot one to each of the Stations. A few months experience, however, showed that six Vaccinators were unnecessary, and an opportunity of effecting a reduction to three soon presented itself, which was taken advantage of. I can say, from experience, that the three have been able to perform the duties as efficiently as the six did at the commencement. All the Stations thus opened, however, could not have been expected to be permanent ones, as they could not comprehend the whole Island, and as time could not be spared to attend them after the number of persons to be vaccinated in each particular district was fairly exhausted. Some of them therefore required occasionally to be changed from district to district. The Byculla, the Nagdavee, and the Dhobee Tank Stations have continued to work unceasingly up to this time; nor do I think they will ever be required to be given up, as they are well placed in thickly-populated parts of the Town. But as all the children in Colaba, whose parents could be induced to bring them to be vaccinated, were

operated on, the Station was transferred to Mazagon, where, at that time, Small-pox was prevalent to a great extent.

From the thickly-populated state of the Fort, it would naturally be expected that a Station there could be permanently kept up, and many persons vaccinated; but four months stay there convinced me that the task was not quite so hopeful. The greater part of the community of the Fort consists of Bunyas, Bhatyas, and Parsees, and there can be no doubt that there must be unprotected children amongst them; but very few presented themselves for Vaccination.

It is a singular circumstance that the Parsees, should be backward in availing themselves of the advantages of Vaccination. A few Parsee children were occasionally brought to the Station, but the number was so small, as to be almost nothing compared to the number of Parsees that now reside in the Fort. With the Bunyas and Bhatyas it was almost a hopeless task; nothing could induce the majority of them to have their children vaccinated, much less could they be prevailed upon to have them brought over to the Station. We were consequently, towards the end of January, obliged to remove the Station from the Fort, as the time at our command was precious, and could not be wasted in fruitless attempts at inducing the obdurate Bhatyas and Bunyas to avail themselves of the advantages of Vaccination.

The district of Mahim was not provided for in the scheme as originally framed; and as Small-pox was prevailing there to a great extent, the Fort Station was immediately transferred to that locality. Happily we met with little or no opposition there. The greater number of the inhabitants seem to have perfect confidence in the prophylactic virtues of Vaccination, and nothing could have been more welcome to them, the more so as Small-pox was committing considerable ravages in the neighbourhood. For months together, we weekly visited this part of the Island, including Augar, Wurlee, Naguam, Sion, and vaccinated a great many children. The success of the operations was also very considerable; indeed, there were very few cases of failure. Of all the parts of the Island, Mahim is the only one where Vaccination can be said to have at all satisfactorily progressed.

When Small-pox was spreading rapidly all over the Island, it was thought very desirable to extend Vaccination over as extensive a part of it as possible, and the Stations were therefore opened in the evening as well as in the morning.

The Girgaum Station, on account of the thinly-populated state of its vicinity, was never very largely attended, and it was temporarily closed in October, in order to establish one between Mandavee and Dongaree; but towards the end of December, we returned to the original Station at Girgaum. Though this Station was chiefly intended for the convenience of the European residents of Malabar Hill and Mahaluxamee, yet, strange to say, none ever availed themselves of it, as the generality prefer taking their children to the Byculla Station to be vaccinated The Mazagon Station was closed, after visiting it continuously for three or four months A. Station was opened at Parell for a few weeks, in connection with the one at Byculla. Within the last month, the Mahim Station has also been given up, and one re-established at Colaba, where no vaccine operations were carried on for eight months together. The morning Stations stood thus on the 31st of December 1859—

Monday	Byculla.
Tuesday	Nagdavee.
Wednesday	Dhobee Tank.
Thursday	Byculla.
Friday	Colaba.
Saturday	Girgaum.

We have thus, during the course of the year, gone over the whole extent of Bombay, meeting with more or less success in the different localities.

As the result of these operations, 7,999 persons were vaccinated—a number though less by 710 than the total vaccinated in the preceding year, yet greater, by about 390, than the

average of the five preceding years. The number vaccinated in the year 1858 was unprecedentally large, owing probably to the prevalence of Small-pox. Of the total vaccinated, 5,895 were Hindoos; 1,147 Mussulmans; 767 Christians; 168 Parsees; and 22 of other castes. The natives who willingly bring their children to the Station at all times of the year to be vaccinated, are the Khojas, Memons, Bohras, some of the Concanee Mussulmans, the higher and some of the middle classes—as, Purvoes, Shenaees, Sonars, &c., and a few of the Parsees and Arabs from on board the bugalows in the harbour. The fishermen of Bombay, generally known by the name of *Koolees*, wherever they are, object to a man to have their children vaccinated. Nothing can prevail upon them; and the only answer they ever deign to give to all reasonings and entreaties is, that they would rather see their children die from an attack of Small-pox than have them vaccinated. With these men, circumstanced as they at present are, I am painfully forced to say that the task is a hopeless one; at least, for a long time to come. There is a section of the Mussulman community—generally natives of the Northern parts of India, known under the general appellation of Benarasees, and for the most part employed in weaving—who also refuse to have their children vaccinated; and they hold the Vaccine Department in contempt to such an extent, that they will not condescend to hear a word from us. Many of the poorer classes—chiefly the Ghattees from the Deccan—are deterred from having their children vaccinated, from the dread of their children being afterwards brought to the Station to have the matter taken from them.

Of the total vaccinated, 4,447 were males, and 3,552 females. As to ages, there were, under one year of age, 3,205, and above one year, 4794,—the excess of the latter over the former being 1,589. But in the number of those vaccinated above one year of age, a great many are under four years old; consequently, the number of children vaccinated is considerably greater than that of adults. There is, however, doubtless a great reluctance, on the part of parents, to have their children vaccinated at a tender age. The lymph has been throughout of good quality. At the commencement of the year, however, matter failed in some of the Stations on several occasions, but it was immediately re-established with supplies from the other Stations. A difficulty is experienced in securing fresh lymph, as all natives show extreme reluctance to allow vaccine matter being taken from their children. It was thought that, perhaps, the poorer members of the community might be induced to consent, if a small reward was given them, and carriage to and from the Station provided. For this purpose, Government allowed the yearly sum of 100 Rupees. But even now the difficulty is nearly as great as ever. Two peons were discharged for receiving bribes, and probably all are more or less implicated; but it becomes almost impossible to detect them in their bad practices. However, some very stringent measures will shortly, I think, be required.

The obstacles in the way of the progress of Vaccination in the Island of Bombay continue as powerful as ever. Apathy and improvidence are carried to a culpable extent by the lower classes. Some object from a false sense of tenderness for their little ones; religious prejudices prevent others from sharing the benefits of Vaccination; whilst the all-powerful custom—caste—comes in the way of many. Pecuniary considerations also have their share in the general indifference towards Vaccination; for the expenses consequent on Vaccination, especially among the middle classes, are so great as to be beyond the means at the disposal of many; and the idea of dispensing with them is very repugnant to their feelings, and they would rather forego the advantages of Vaccination, than have their children vaccinated, and not be able afterwards to perform the customary ceremonies.

CONCAN DIVISION.

Superintendent.—Assistant Surgeon T. B. Beatty.

Establishment.—Eighteen Vaccinators.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	45,983	12,227	....	43,856	95·3
1859....	39,669	....	6,314	36,971	93·1

REPORT FOR 1858.

THE number of vaccinations performed during the past year, as will be seen by the above Table contrasted with the previous one, shows a large excess in favour of the year 1858. This increase of work may, I consider, be partly attributed to the stimulus which the newly-proposed system of payment by percentage has created amongst the Vaccinators, and which has caused them to work with increased energy and vigour.* Of the total number vaccinated, 43,856 are recorded as successful, or 95 per cent. on the whole. There were 935 failures, which is at the rate of 2 per cent.; 1,192 cases were reported as doubtful. As regards the successful operations recorded, I have had no reason to doubt the truthfulness of the Vaccinators' Returns. I have taken every opportunity and means of testing their correctness, and though I was eight months out of the year constantly travelling through the districts, engaged in examining the Vaccinators' work, in only one instance I met with an incorrect Return. The success of a clever Vaccinator, working with good lymph, is remarkable. I have repeatedly witnessed from one hundred and fifty to two hundred children vaccinated by one man in a day, and in returning to examine the result, have rarely found more than three or four failures.

In the Tanna Zillah, a very marked increase of work is observed last year compared with the preceding. During the past year, the total number vaccinated was 16,948; in the year preceding 10,412, showing an increase of 6,536. In the Rutnagherry Zillah, during the year 1857, the number of operations was 23,344; and during the past year 29,035, giving an excess in the present over the preceding year of 5,691. The lymph throughout the Division has been reported good, and from the specimens I have seen, I consider it could not be surpassed in excellence.

About the commencement of last year, a severe outbreak of Small-pox occurred in the Rutnagherry Collectorate. The epidemic appeared almost simultaneously throughout the Zillah, and continued for nearly six months. Immediate steps were taken to arrest its progress as soon as possible, and by permission of the Director-General, four Assistant Vaccinators were entertained temporarily, as long as their services were deemed requisite. Considering it of importance to ascertain the effect of this disease on the population, I forwarded Returns to the Acting Collector, requesting he would cause them to be filled in by the Mamlutdars giving the information required. These Returns were made out, so as to show the number of cases of Small-pox which had occurred in each Talooka during the period the disease lasted;

* This subject is noticed in another place.

the extent to which unvaccinated, compared with vaccinated, children had been attacked; and the amount of mortality in each. The result of this inquiry was communicated to the Director-General in my letter, No. 222 of 1858, dated 4th August. In the 2nd paragraph of the letter referred to, it was reported—"From an inspection of the Return appended, it will be observed that the total number of children attacked with Small-pox during the six months—from 1st January to 31st December 1858—amounted to 3,196: out of this number, 3,005 recovered, and 191 died. The proportion of deaths occurring in unvaccinated children to the whole number, is shown to be nearly six per cent., whilst of those who had been previously vaccinated, it was little more than two per cent. One child in every fifteen died amongst the unprotected, whilst the mortality was only one in forty amongst those previously vaccinated, Hence, the proportion of recoveries between vaccinated and unvaccinated is in the ratio of 8 to 3. In contrasting the Returns from Unjunwell and Severndroog Talookas, the difference in the mortality from Small-pox amongst the unvaccinated and vaccinated is very remarkable. In the former Talooka, 57 children—none of whom had been vaccinated—were attacked by the disease; the percentage of deaths was so large as 17·4. In the Severndroog Talooka, 2,041 cases occurred: out of this number, 177 had been previously vaccinated, and amongst these latter, no deaths occurred."

During the year, my tour of inspection was made partly in Tanna and partly in Rutnagherry Collectorates. In the former, the work carried on by the Vaccinators in the Morbar, Tullojee, Oonderee, Rewadunda, and Alibaugh districts was examined. In the month of March, I proceeded to Unjunwell, in the Rutnagherry Zillah, and inspected the work in that and in the Gohugur districts; from thence proceeded to Severndroog, in which Talooka I was engaged until the beginning of May, when the monsoon set in, and compelled me to return to head quarters. In September, I again went into the districts, and up to the end of the year, the Wagotun, Malwun, Vingorla, and Rajapore districts were examined.

In my Report for the year 1857, it was mentioned that Vaccination had been successfully commenced in the Tullojee Talooka, Tanna Collectorate. Until the beginning of the year 1858, I am not aware that Vaccination had ever succeeded in that part of the Zillah. The people of that district had hitherto shown the greatest aversion to its being introduced. Even so late as in January 1858, one of the Vaccinators was directed to carry on operations from Callian—the adjoining Talooka—to Tallojee, but immediately reported his inability, in consequence of the villagers having assailed and prevented him. In the month of February, availing myself of the opportunity of the Acting Collector, Mr. Morgan, being in that district, I proceeded there, and brought to his notice the very unsatisfactory state of Vaccination, and that inoculation was practiced universally throughout the Talooka. Owing to the valuable assistance rendered by Mr. Morgan, inoculation was at once done away with, and I was enabled to introduce vaccine matter, and to commence Vaccination. During the first operations, I attended personally, and remained with the Vaccinators till the system had been fairly established. Since that time, Vaccinators have been employed uninterruptedly, and their work has been completely successful. Within the compass of a year, 2,628 have been vaccinated in Tullojee alone: out of this number, 2,563 were successful cases. Last month, the Mamlutdar forwarded me a report that no village throughout the Talooka had been left unvaccinated, and that, for the present, the services of the Vaccinators might be dispensed with. Much of this success, I consider, is to be attributed to the tact and interest evinced by the Mamlutdar. He accompanied the Vaccinators to those villages, where difficulty was met and objections shown, and thus overcame the prejudiced feelings of the people. No case of inoculation was reported in that Talooka during the past year, where formerly nothing else was resorted to.

In the Chief Secretary's letter to Government, No. 2756 of 1858, attention was called to the subject of Vaccinators being in occupations other than those for which they were originally

intended. This practice does not exist amongst the Establishment of the Concan Division. With the exception of one man, whom I am obliged to retain in office as Karkoon—there being no regular Karkoon sanctioned for the Vaccination Establishment, for the purpose of carrying on the daily Marathi correspondence,—each man is solely employed in the work for which he was at first intended—namely, that of itinerant Vaccinator. With reference to the second subject referred to in the same letter, viz. that of unqualified substitutes being employed during the absence of any of the Vaccinators, I would beg to state that I have always been careful to prevent such an abuse to Vaccination occurring. In this Division, a few Oomedwars—generally four or five—have been encouraged to accompany the Vaccinators, for the purpose of becoming instructed in their work. These men are permitted to be attached to those Vaccinators only who are known to be active and intelligent. Some Oomedwars in this Division have accompanied the Vaccinators for three or four years. They are as fully qualified to perform the work of a Vaccinator as any member of the Establishment, and when leave is granted, or a vacancy required to be filled, a qualified substitute can always be supplied without loss of time.

REPORT FOR 1859.

In my Report for the year 1858, I was enabled to show an amount of work which had never hitherto been accomplished in this Division; and though the actual number of operations for the year under consideration is below that of the previous one, this diminution has arisen, not from any want of activity on the part of the Vaccinators, nor from disinclination of the people to receive Vaccination, but from causes which will be satisfactorily explained hereafter.

The total number of persons vaccinated during the past year was 39,669, and in 1858 there were 45,983, thereby showing a decrease in actual figures of 6,314 in the Returns of last compared with the preceding year.

But it was stated in the Report for the year 1858, that, in consequence of the prevalence of Small-pox in the Rutnagherry Collectorate, four additional Vaccinators had been employed temporarily for different periods during the year, and that, out of the total number of vaccinations performed, the operations of these four men, in the aggregate, had amounted to 1,357, having a total of 44,626 vaccinations as the actual work of the regular Establishment. During the past year, owing to the almost total exemption from Small-pox in this Division, it was found necessary to entertain only one extra Vaccinator, and that for the short period of one month. His operations amounted to 135, and deducting this number from the total 39,669, a remainder of 39,434 is shown as the actual work of the seventeen itinerant Vaccinators on the Establishment, one man being employed as Karkoon in the Superintendent's Office. The difference therefore of the work of last year, contrasted with 1858, may be stated at 5,192 decrease. The cause of this deficiency is readily explained, from the several facts that, owing to the introduction of the new system, which was being made trial of for the payment of Vaccinators by percentage on their work, an immense amount was performed by them. In fact, in parts of the Rutnagherry Zillah, during the year 1858, there was scarcely an available child of above one year old left unprotected; the Vaccinators consequently since then had found it more difficult to collect subjects for operation.

But there were other circumstances to account for the deficit in last year's Return. In the month of March, one of the best Vaccinators on the Establishment died, and a considerable time elapsed before his substitute was supplied, and lymph re-established in the part of the country where he had been employed. In the month of April, one Apprentice was dismissed for falsification of his Returns; one First Assistant, of 30 years' service, was obliged, on account of infirmity and loss of sight from old age, to resign his appointment. In both of these cases

likewise, time was necessarily lost in procuring qualified substitutes, and in recommencing their work. These are causes quite sufficient to account for the decrease in the amount of work for last year compared with the preceding one. Had the contingencies related not occurred, I have little doubt that the amount of work of last year would have equalled that of 1858; as it is, with the exception of the year 1858, the working of the past year has never been equalled in this Division.

Of the total number vaccinated—viz. 39,669,—there were 36,971 successful cases recorded, or 93·1 per cent. on the whole. Of unsuccessful cases there were 1,283, or at the rate of 3 per cent.; and of doubtful cases—including those which had not been seen after operation—and failures together, there were 2,698, or about 4 per cent. on the entire number.

With the exception of two individuals, I have had no cause to be otherwise than satisfied with the conduct in general of the several Vaccinators in this Division.

As regards the sex and age of the total number vaccinated (*i.e.* 39,669), 20,338 were males, and 19,331 were females, being an excess of 1,007 in favour of the former; 33,119 were "above the age of one year," and 6,550 below one year, showing a difference in excess of the former of 26,569. I deem it unnecessary to dwell on the cause influencing this disparity. It will suffice to mention that the people of the Concan have a great aversion to their children being vaccinated until weaned. This dread—by no means an unnatural one—is inherent; and though it is always explained to them that no harm need be anticipated from the operation at so early an age as from three to four months, the dislike to its performance continues to exist. No sooner is the child weaned, than they at once give it for vaccination. For the most part, beyond promising to them that no injury will follow the operation if performed at an earlier age than one year, I avoid interfering with their prejudices in this respect, having always found that, with natives, it is a better plan to allow them to learn and adopt practices from example and observation, than force them reluctantly to accept what they show an unwillingness to.

During last year, in the Tanna Collectorate, the total number vaccinated was 13,781; in the previous, there were 16,948; and in the year 1857, 10,412. There has been a decrease therefore, compared with last year's Report, of 2,708, and an increase over the year 1857 of 3,369. In the Rutnagherry Zillah, the entire number vaccinated during the past year was 25,888; in the previous one 29,344; and in the year preceding 23,344. A decrease of 3,147 is shown to have occurred last year compared with 1858, but contrasted with 1857, an increase of 2,544. The following table exhibits at a glance the working of the Establishment during the past and two previous years in the Rutnagherry and Tanna Collectorates separately:—

Statement showing the total VACCINATIONS *performed in the* RUTNAGHERRY *and* TANNA COLLECTORATES, *for the years* 1857, 1858, *and* 1859.

Years.	Collectorates.	Total.
1857....	Rutnagherry	23,344
	Tanna	10,412
	Total..	33,756
1858....	Rutnagherry	29,035
	Tanna	16,948
	Total..	45,983
1859....	Rutnagherry	25,888
	Tanna	13,781
	Total..	39,669

Vaccination at all times succeeds less prosperously in Tanna than in Rutnagherry Collectorate; and that, notwithstanding the population of the former exceeds by 1,50,000 inhabitants that of the latter, the amount of vaccinations in each year is proportionately smaller. The computed population of Rutnagherry Zillah is 6,65,238, and the number of individuals vaccinated during the twelve months was 25,888, or at the rate of 3 per cent. The population of Tanna Zillah is estimated at 8,15,849, whilst the total number vaccinated during the year amounted to but 13,781, or in the proportion of a little more than 1 per cent.

During the last few years, there has been a marked change of improvement towards the propagation of vaccination in the Tanna Collectorate, and within the past two years, vaccination has been introduced, and successfully carried out, in some parts where formerly nothing save inoculation was resorted to or permitted. In my Report for last year, special reference was made to one Talooka, viz. that of Tullojee, in Tanna Collectorate. Until the year 1857, vaccination, though repeatedly attempted to be introduced, had never succeeded in that district. The inhabitants invariably resisted with violence a Vaccinator amongst them. This Talooka was infested with Inoculators, who gained a livelihood by their practice, getting two annas a head for every child they inoculated. These men were the sole cause of prevention to vaccination being introduced. When once the Inoculators were eradicated, and vaccination fairly established, every obstacle was removed, and within the compass of six months upwards of 2,500 children were vaccinated. At present a Vaccinator is employed successfully in that district. But the most gratifying circumstance which I am enabled to record, with reference to the Tanna Collectorate during the past year, is the fact of the villagers, belonging to the separate State of the Rajah of Jowaur, having petitioned my Vaccinator—who was working in the district adjoining—to extend his operations into their territory. The Vaccinator was directed to comply with their request, and vaccinate the children of those desiring it. I really cannot imagine any better example of the growing appreciation of successful vaccination than this fact of a body of natives, entirely independent of our Government, demanding, of their own free will and consent, the introduction of a practice which, from their birth, they had been taught to discard; and it is known that, in matters regarding their own interest, and more especially that of their children, there are no keener or more discerning observers than natives generally, but are equally slow in adopting the use of any innovation till practically satisfied and convinced of its utility and advantages.

Throughout the year, the vaccine matter and vesicles have been excellent; indeed, so successful have been the operations of the greater number of the Vaccinators, that I have not considered it necessary nor expedient to renew the lymph. The natives of the Concan are fond of having a large number of vesicles produced on the arms of their children. They are dissatisfied with less than five on each arm, and I have often counted as many as six and nine. The inutility of these numbers in excess has often been pointed out to them, but to no purpose; and as I have never observed any evil result following the production of these numbers, and as the people prefer them, they are not prohibited. It is very satisfactory to be able to state that, during the past year, Small-pox has not appeared as an epidemic in any part of the Concan. In last year's Report, attention was drawn to a severe outbreak of the disease, which appeared in Rutnagherry Zillah about the commencement of the year 1858. The steps which were taken to check the spread of the disease, and the extent of loss which the unvaccinated, compared with the vaccinated portion of the population, had sustained, was likewise set forth. It was shown that, within the space of six months, more than three thousand cases of Small-pox had occurred. The proportion of deaths among the unvaccinated was nearly 6 per cent. to the whole number, whilst that of those who had been previously vaccinated, and who were attacked with the disease, was about 2 per cent.

The practice of inoculation is almost entirely done away with in the Concan. In Rutnagherry Zillah, I believe it to be entirely eradicated, and though in Tanna Collectorate—in

some of the northern districts—it is still practiced, its adoption is rapidly disappearing. So little of inoculation is now being carried on in the Concan, that I do not regard it in the light of an impediment to vaccination. For this great improvement in the Tanna Collectorate—viz. the eradication of inoculation,—I am entirely indebted to the assistance of the present Collector—Mr. Morgan.

Beyond desiring that the Vaccinators be placed on a better footing as regards pensions to the superannuated, and that some arrangement, better than at present exists, for the instruction of Probationers be made, I have no suggestions to offer regarding the more effectual spread of vaccination.

I may allude to one improvement which has been introduced within the last year, as regards the number of times each Vaccinator operates during the month. Formerly, in this Division, fresh lymph was only obtained but once in every eight days from each man, and consequently if, by any misfortune, the vaccine became lost in a distant part of the country, often a month expired before it could be renewed, and the man's work re-established; for in this Division lymph is invariably taken direct from the child's arm, it being found not only a cheaper plan, but infinitely more certain to convey fresh matter direct, than trust to the uncertainty of vesicles being produced from the use of dry matter on glass. Every Vaccinator now operates twice during the eight days, and in a different part of the Talooka where he is engaged. Three days are allowed to elapse between each day of operation; and a weekly Report is sent to my office, stating the exact day and village where fresh vaccine may be found. This plan I have found to answer admirably, and it seldom happens now that any Vaccinators' lymph is lost for more than a few days. Twice in the week is as often as any man can collect subjects for vaccination, and afterwards watch and note down the result of each operation carefully.

In the beginning of September, I proceeded into the districts and commenced my tour of inspection in Rutnagherry Zillah; subsequently I proceeded to Tanna Collectorate, where the work of three men was examined, and found to be excellent and correct. In the beginning of December, I was obliged, owing to the illness of the then Civil Surgeon at Tanna, to hasten into camp and assume medical charge of the duties of that station, and from which I was not relieved until the very end of December.

NORTHERN DECCAN DIVISION.

Superintendent.—Assistant Surgeon W. Davey.

Establishment.—Eighteen Vaccinators.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	20,783	220	....	19,998	96·2
1859....	20,013	....	770	19,018	95·0

REPORT FOR 1858.

THE total number of vaccinations effected in this Division during the year is 20,783. Comparing the work done with that of the previous year, a small increase (220) is observed. The same cause which undoubtedly retarded vaccination last year, and diminished operations so much below the average, existed also in the present year. In both years, the Establishment was virtually short of its full complement of Vaccinators. Although, at the end of 1857, I succeeded in placing the Establishment on its allowed numerical strength, the services of new men, then engaged, did not become available until the months of April and May of the year now under report. The slight increase of the present over the past year may therefore be considered satisfactory, so far as it goes. The Division is so extensive—comprising between twenty-seven and twenty-eight thousand square miles,—and the Native Vaccinators necessarily so widely scattered for the protection of the community from Small-pox, that the Superintendent cannot possibly exercise that watchful supervision over each member of his Establishment as will secure, in every instance, pefectly reliable returns; neither has the check imposed, with the view of preventing fabrication, been found sufficiently trustworthy. This last however, which has, I hope, been rendered more effective in this Division, will be noticed subsequently.

Of the total vaccinated, 10,704 have been males, and 10,078 females, the former, as usual, showing a slight preponderance over the latter. In respect of age, little more than twelve-and-a-half per cent. only of the operations have been performed on children under one year old, whilst the operations on those above that age have amounted to 87 per cent., showing unmistakably the objection of parents to submit very young children for vaccination. The skill and attention of the Vaccinators, as shown in the result of their operations, is the most favourable aspect of the Return, the percentage of successful cases being a fraction over 96 per cent., whilst the unsuccessful and doubtful together do not amount to 4 per cent. I do not, however, wish it to be understood that I place implicit reliance on these figures. I even think it probable that some cases of unsuccessful vaccination are never returned at all; at least, one instance of the kind I detected during the year, and it is not unreasonable to suppose that it may have occurred with others, who, from a feeling of being thought inexpert operators, are induced to exclude from their Returns unsuccessful cases. This supposition, however, does not affect the result of the total number returned as vaccinated, which I believe to be tolerably correct, though it may be deduced from what I have observed, that a large number may have undergone the operation, and been excluded from the Vaccinators' Returns, owing to the operation having been unsuccessful.

The lymph throughout the year has been of excellent quality in all the Collectorates of this Division; large supplies have been distributed wherever required. Amongst other places, the station of Dapoolee and the Malwa and Rajpootana Divisions of the Army have been successfully furnished with lymph. It may be worth while to notice that these supplies were packed for transmission in the manner suggested by Superintending Surgeon Maxwell of the Madras Army, courteously brought to my notice by Dr. Morehead, and that I am inclined to attribute these unusually successful results, not only to the good quality of the lymph, but mainly to its preservation from decomposing causes, as secured by this method, which consists simply in enveloping the lymph in a little coarsely-powdered quick-lime, wrapped over with foil or wax-cloth.

Small-pox as usual was more or less prevalent at the approach of the hot season, especially in the villages lying close around Poona and Kirkee, and towards the Western Ghauts; but I am unable to say to what extent the disease prevailed, though my impression was that it soon disappeared. Measures were at once taken for vaccinating the unprotected community wherever the disease appeared, which the apathy of the people renders necessary by their indifference to vaccination in ordinary times. It seems impossible not to attend to a district attacked with Small-pox, however recently the Vaccinator may have been over it, and the people offered the opportunity of having their children vaccinated, which they have at the time neglected. By these frequent interruptions to regular work, much time is lost; the Vaccinator is obliged to make use of dry lymph, which is seldom successful, and his stock has to be renewed. It is evident that vaccination can scarcely be said to be so progressive in this Division as its extent and population would render desirable. No instance of inoculation has been brought to my notice, and I have no reason to believe that the practice now exists in my Division, though doubtless such was the case formerly.

For the more effectual spread of vaccination, one of two things appears necessary: that the people themselves should be more alive to the benefits of vaccination; or the Native Vaccinators chosen from a class who would possess sufficient intelligence and patience to set aside scruples and overcome apathy. Neither of these conditions are at present fulfilled. The people are not anxious for vaccination; and too often the Vaccinator feels that he has done his duty, when he has visited a village, and been informed by the Patel that none of his people wish to be vaccinated. I feel convinced that the success of the Vaccinator is attributable more to his prestige as a servant of Government, and the support he derives as such from District Officers, than to any anxiety, on the part of the people, to avail themselves of vaccination, or to any intrinsic merit of his own. The remedy is I think obvious, but impossible to secure, as long as the present system of remunerating the Department continues.

My tour of inspection did not commence until the end of February, when, leaving Poorundhur, I passed into the south-eastern districts of the Poona Collectorate, visiting Sassoor, Beemthunee, Soopeb, Baramuttee, and Indapore Talookas, and inspecting vaccination therein. Returning northwards, I next proceeded to the Kheir and Vetala districts, and subsequently went into the Ahmednuggur Zillah, where I felt obliged to proceed to look into some Returns which had been sent in from that Collectorate, which, on examination before the Assistant Magistrate, were proved to have been fabricated, and the delinquent was in consequence dismissed the service. My attention has been more especially directed to the confirmation of Native Returns, which have gone through a stricter scrutiny than usual, and have proved generally satisfactory. I have also been occupied in devising and carrying out a better system of checking these Returns, and in communication with the several Magistrates of my Division, and with the sanction of the Director-General Medical Department, the method before in use has been abandoned. In place of allowing Native Vaccinators to forward with their Returns certificates of their work from Heads of villages, many of whom are incapable of writing or reading, Mamlutdars will, in future, certify direct to the Superintendent the monthly number of vaccinations that have been effected in their respective charges.

REPORT FOR 1859.

In the Northern Deccan Division, during the year 1859, 20,013 persons of both sexes have been vaccinated—a number which falls short of the operations effected in 1858 by 770. There is nothing in the history of the year to account for this deficiency; the obstacles which usually attend vaccination have not prevailed to a greater extent than in former years; and the perfectly tranquil state of the whole Division should have promoted rather than retarded vaccination. We are compelled therefore to look for the cause of failure in the working of the Department. There are five Vaccinators whose Returns for the year show a falling off to the extent of 2,099 cases in comparing their work for 1859 with that of 1858, and I am not aware of any peculiarities connected with their charges during the year to account for this deficiency, whilst their standing in the Department precludes all excuse of inexperience. The shortcomings of several members of my Establishment have been notified to them very frequently during the year, and do not now come under my consideration, for the first time. I find that recoveries on account of fines amount to Rs. 89 for the year, whilst for 1858, the amount was only Rs. 8. The deficiency may therefore be fairly attributed to general inattention on the part of some members of the Establishment, and to exceptional, but more glaring, instances of misconduct on the part of others; these last have been noticed from time to time, and disposed of as they seemed to deserve. There are, however, many members who worked well and zealously. Of the total vaccinated, 10,509 have been males, and 9,504 females. With respect to caste, we find that 96·55 per cent. are Hindoos, inclusive of low-caste, whilst the Mussulman population can scarcely be said to be represented, inasmuch as they form less than three-and-a-half per cent. of the vaccinated. At first sight, this certainly appears surprising; for we undoubtedly find that Mussulmans who come in contact with Europeans exhibit a readiness to avail themselves of European medical science; but apart from this influence, they would appear to be just as bigoted fatalists as the more ignorant classes, and still less inclined to recognise the indirect Government agency of the Vaccinator. It may be said of a Department which works with Brahmin agency on voluntary principles, that its sphere of influence and usefulness would be chiefly confined to its own caste; but there has been an occasional Mussulman Vaccinator, and there is now one in the Department, who, however, returns fewer vaccinations amongst Mahomedans than do several of the Hindoo Vaccinators. No Parsee ever appears to come under the Divisional Superintendent's Establishment; the same may be said with regard to Europeans, who, although vaccinated with lymph supplied by the Department, rarely come under its direct agency. The few cases returned are obtained from civilians, or others on duty in the districts. In respect of "age," it is to be remarked that nearly the whole operations are effected on persons above one year old, the percentage of which is 90·82, whilst under one year, only a trifle over 9 per cent. has been obtained. The results of operations have been highly favourable, being for successful cases a fraction over 95 per cent., the unsuccessful and doubtful together being under 5 per cent. The vaccine disease exists satisfactorily throughout the Division, from the practice of immediate vaccination, which is insisted on as far as practicable. The lymph does not appear to have deteriorated in any way. Small-pox was epidemic in the Division during the first six months of the year; but the Reports sent in merely mention its existence in certain villages which came under the cognisance of the Vaccinators, without entering into details. I have therefore no means of ascertaining the extent of the disease or its fatality; but I believe its ravages are not now so severe as formerly. No instances of inoculation with Small-pox have come under my notice during the year, and I am not aware that the practice now exists. Suggestions regarding the means to secure the more effectual spread of vaccination have before been offered, and I cannot do better than call attention to Dr. Morehead's opinion on this point, as expressed in the last paragraph of the printed Reports on Vaccination for 1856-57,

page 45. I presume all Superintendents entertain similar opinions on this subject, and are equally desirous to see a more liberal scale of salary introduced, with some arrangement respecting pension after old age incapacitates for further service. This last point cannot, I think, be too strongly insisted on. The introduction of a Senior Vaccinator into each Zillah, charged with the duty of inspecting Returns, and reporting on supposed obstacles to vaccination, as frequently urged by Vaccinators, would, I think, further the cause of vaccination. I have found that Vaccinators too frequently succumb to these difficulties—a fault inherent in the native character,—and the extent of the Division renders immediate personal supervision, on the part of the Superintendent, impracticable in each instance. The native district authorities engaged in their own duties, and generally taking but little interest in vaccination, too frequently assent to whatever the Vaccinator alleges in extenuation of his own negligence. By means of an intelligent and responsible Native Inspector in each Zillah, larger and more reliable Returns would be obtained, and vaccine registration, which at present only partially exists, might be effectually introduced. The position of the Superintendent, I also respectfully submit, calls for some improvement in furtherance of the cause of vaccination.

Vaccination was inspected during the year in nineteen Talookas of the Poona and Ahmednuggur Collectorates. The Superintendent's attention has been especially directed to the quality of the lymph and to the necessity of vaccine registration, without which it is impossible to verify the Vaccinators' Returns.

SOUTHERN DECCAN DIVISION.

Superintendent.—Assistant Surgeon J. Mills.

Establishment.—Eighteen Vaccinators.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	15,285	....	247	14,313	93·6
1859....	13,318	....	1,967	12,278	92·1

REPORT FOR 1858.

THE total number vaccinated in 1858 was 15,285, against 15,532 in 1857, showing a decrease of 247. This is accounted for by the fact that two Vaccinators, who were in regular work, were dismissed in August last and were replaced by new men, while four Vaccinators during the year were received into the Civil hospitals of their respective Collectorates. But though the actual decrease is thus accounted for, the result shown is far from satisfactory, and the amount of work done by each Vaccinator, as compared with that in other Divisions, would seem to indicate either great want of zeal in the Establishment, want of active assistance from the local authorities, or much disinclination on the part of the people to receive vaccination; and I think that all these causes had their share in retarding progress in this Division. In the proportion of males and females, there is very little difference from 1857, being males 52·4, and females 47·6 per cent. against 52·1 and 47·9 in 1857. In the numbers "under one year" of age, there is not any improvement, the proportion being only 24 per cent. against 26·4 in 1857. The Returns of different Vaccinators show such very marked contrasts in this particular, that I cannot but think that more depends upon individual operators, than on the fears or prejudices of the people. Some indeed would appear to believe that they are doing wrong in vaccinating very young children, notwithstanding all that is urged upon them on the subject. The proportion of successful operations is not so large as in 1857, being 93·6 per cent. against 95·3. This difference I attribute rather to Vaccinators making more correct returns of all operations, than to any want of efficiency in the lymph, though it is evident that some Vaccinators make a practice of returning none but successful operations. The percentage of success from January to June exceeded by 1·6 that from July to December. The condition of the lymph and vesicles has been good throughout the year. Small-pox was prevalent throughout the whole Division to an unusual degree, especially during the months of March, April, May, and June—hardly a Talooka escaped untouched. The total number of cases reported in the four Collectorates during the year amounted to 5,925, and the deaths to 1,241, or nearly 21 per cent. These numbers are taken from the quarterly Returns forwarded by the Collectors, which are often not received until after the epidemic has passed away. Whenever reports have been received of the disease existing at the time in any district, assistance has immediately been sent, if it could be spared; but at the time the epidemic was at its height—viz. in March, April, and May,—it was so widely spread that it was impossible to withdraw Vaccinators from one point to send them to another.

No case of inoculation has been reported to me during the year, and I have no reason to believe that the practice prevails in the Division. There is much ignorance, or much indifference, on the part of Patels in regard to filling up the Police Report, Form IV. My inspections have satisfied me that it is a frequent practice with them to sign the form with such numbers as the Vaccinators give them, without having made any personal inspection of the cases operated on, and as the signature is often given at the very time of the operations being performed, it is impossible that the result can be known either to the Vaccinator or Patel. The value of Form IV. is, in such cases, entirely nullified. Both in overlooking the working of the Patels—in pointing out to them the right mode of performing their duties—and in persuading the people to receive vaccination, there is generally great need of increased activity on the part of the local native authorities. One very frequent source of complaint, on the parts of the Vaccinators themselves, is the difficulty of obtaining the occasional assistance of a peon, as directed in paragraphs 19 and 24 of Section VIII. of the Medical Regulations. That such assistance is frequently required there can be no doubt, as it often happens that the people will not pay any attention to the Vaccinator himself, whilst little help, and even actual opposition, is at times met with from Patels and Koolkurnies. Although it is not necessary that the Vaccinator should have a peon regularly attached to him, it would, I think, be well if, in those villages where there are Police peons, one were told off, whose duty it should be to give assistance to the Vaccinator on the days that he visited such village. This need interfere but little with his other duties, as it would only be once a week, during a few consecutive weeks, that his services would be required for a few hours. But as long as no one is specially named for this duty, no one is responsible, and every one will strive to avoid it. In the Sattara Collectorate, where there is a separate Police Establishment, no difficulty is met with in obtaining help when required.

Resumè of Tours.—Between the date of my last annual Report and the setting in of the rainy season, I examined the work of the Vaccinators in the Bettehgerree Mahal of Dharwar Talooka, in Hooblee Talooka, and in the Bunkapore Talooka, all in the Dharwar Zillah, also in two Talookas of the Belgaum Zillah. The early setting in of the rains at the end of April put a stop to further inspections at that time. As soon as the season opened, I examined the work of the Vaccinator in Hookeree, Chikoree Talooka, and thence proceeded to Gokak. I there examined the work in the Moodhole Jagheer, where I found vaccination making steady progress. The work was commenced only in December 1857. After this I proceeded to Budamee Talooka and inspected the work. Having thus finished the Belgaum Collectorate, I crossed into Modebahal Talooka, Sholapore Zillah, and examined the work there. Thence I went to Beejapore, to try and ascertain whether the difficulties reported by my predecessor in 1855 still existed. I experienced no difficulty in getting subjects for vaccination in Beejapore itself, and the Mamlutdar assures me that little opposition will now be met with. The greatest difficulty appears to arise from the villages being scattered so far apart. I hope before long to be able to place an Assistant there, and make another effort to establish vaccination among the people. From Beejapore I proceeded to Tekotch—a portion of the Jagheer of the eldest of the Koorundwar Chiefs—and examined the work of the Vaccinator. The Chief himself was at Tekotch at the time of my visit, and from him and his Karbari I received every attention and assistance; but this readiness to assist, when I was present, contrasts strongly with the fact that his Vaccinator was allowed to remain a whole month in the town of Koorundwar, without being able to obtain one subject for vaccination. I next examined the work in the Jhatt Jagheer. The inspection was by no means satisfactory, and it appeared that those in authority were not at all aware of what was required. I explained fully to the Karbari what the working of the system should be, and he promised to give it his full attention for the future. From Jhatt I came to Churchun—a Mahal of the Indee Talooka, Sholapore Zillah,—and have examined the work of the Vaccinator, and have found it excellent in all particulars.

REPORT FOR 1859.

THE total number vaccinated in 1858 was 15,285, in 1859 only 13,318, showing a decrease of 1,967. The chief cause of this diminution has undoubtedly been the violence with which cholera raged throughout the Division during the months of May, June, and part of July. The greater number of Vaccinators reported that their work was very much interrupted by the disease. The people of the Deccan have not the same lively dread of Small-pox that is entertained by the inhabitants of the Concan, and the prevalence of any other sickness at once checks the very slight inclination they might feel to receive vaccination; besides which, the Vaccinators themselves are greatly influenced by the fear of cholera, and do not willingly travel far from their own homes. During the first four months of the year, the returns averaged 1,361 monthly; during the next four, they fell off to 886; and in the last four they had become 1,079. Another cause of decrease has been the death of two Vaccinators. Of these, one was the Head Vaccinator, whose Return for 1858 was much the largest of any made by the Establishment. He went away on leave in April and died in September, and his substitute was unable to keep up anything like his numbers. By his death alone, I calculate that 600 cases were lost. Another Vaccinator had for some time been working steadily and increasing his returns, but he was in hospital for nearly five months before his death. Several other Vaccinators have suffered from sickness for various periods. The services of one Vaccinator have been almost entirely lost, in consequence of the office being removed to Rutnagherry during the rains.

The proportion of females is rather smaller than in 1858, being 45·85 per cent. against 4,760. Almost the only improvement is in the matter of age, and my constant representations to Vaccinators, village authorities, and people, at last appear to have produced some effect, the numbers "under one year" being in the proportion of 32 per cent., while in 1858 it was only 24, and in 1857, 26·4. The actual number is in excess of both the two previous years, being 4,271 against 3,673 in 1858, and 3,991 in 1857. The percentage of successful cases is slightly less than in 1858, being 92·26 against 93·6; but this arises rather from the increase in the number of "doubtful" than of actually "unsuccessful" cases, as the Vaccinators have the strictest orders to enter as "doubtful" every case, the success of which they are unable to ascertain by personal inspection. There has been a slight improvement in the number of "other castes" who have been vaccinated. I have tried hard to combat the prejudices of the Dhers, &c., and to induce the Vaccinators to do their utmost among them, but though there has been a yearly increase, it has been very small, the numbers in 1857, 1858, and 1859 being respectively 298, 307, and 344. The number of Christians vaccinated is much less than in the two previous years. This arises from the Vaccinator, who was stationed in the Pudshapore Talooka, being forbidden from vaccinating in Belgaum and the neighbourhood without special orders. The condition of the lymph and vesicle has been good throughout. An attempt to introduce lymph from England failed,—not a single vesicle was produced. Small-pox was prevalent throughout the Division during the months of February, March, April, and May, and raged with even far greater violence than in the previous year. In 1858 it was most severe in the Belgaum Zillah; but though in 1859 there were many cases, it was in Sholapore and Sattara that it was most violent, and unfortunately it was coincident, during a great part of its prevalence, with cholera. The total number of cases reported during the year was 20,295: of whom were males 10,718, and females 9,597; and the deaths were 3,578: males 1,894, females 1,684. The disease was not so fatal in proportion to the numbers attacked as in 1858, the percentage of deaths being in 1858 nearly 21 per cent., and in 1859, 17·6; and of these, it is not improbable that many were really caused by cholera. No case of inoculation has been reported. The experience I have now had in this Division has quite convinced me that vaccination will never be successfully carried out with the present Establishment; the work to be accomplished is out of all proportion to the means for performing it. It is quite

clear that, until the people are made acquainted with the nature and value of vaccination, they will not avail themselves of it. Where it has once been established, there, if they do not demand it eagerly, at least opposition in a great measure ceases; but though nearly seven years have now elapsed since the Division was formed, there is a very large portion of it to which the advantages of vaccination have not been extended; and why? because the number of Vaccinators was not sufficient to introduce it, in the first instance, in all parts. To show how inadequate the means are, I will contrast this Division with the Concan, in which there are two Zillahs containing a population of about 1,500,000, impressed with the greatest dread of Small-pox, and eagerly demanding vaccination, and for this, there are eighteen Vaccinators. The area, too, is such that the Superintendent is able to visit nearly the whole Division during the year. Here there are four Zillahs containing—independent of the Jagheers—a population of nearly 4,000,000, entertaining no particular dread of Small-pox, and, for the most part, not only not desiring vaccination, but opposing its introduction. There are forty Talookas, some of them of enormous extent, and for this work, too, there are also eighteen Vaccinators; and as, in addition to these, the Superintendent has under him the whole of the Kholapoor states and sixteen Vaccinators entertained by Native Chiefs, it is impossible for him to go over the whole Division even in two years. I have tried so to distribute the Establishment that each Vaccinator should be in the centre of two or more Talookas; but whenever a man is called away from the district in which work is going on steadily, to give assistance in another, it almost always happens that much valuable time is lost, and it frequently occurs that, on arriving at a village to which he has been sent at the request of the authorities, he finds that the people will not receive his services; his lymph is lost, and delay occurs in re-establishing it. I have no hesitation in stating as my opinion that, if the present Division is retained, the Establishment should be doubled, at least for the next two or three years, so as to get the whole population made acquainted with vaccination, without withdrawing men from those parts where they are already at work. But I think it would be far better to divide the Northern and Southern Deccan into three Divisions, each with Establishments of the present strength, and so enable the Superintendents to make more frequent, and therefore more effective inspection of all their districts. The only other alternative would be to concentrate the whole of the Vaccinators in one Zillah at a time during the fair season, and go thoroughly over it; but this would have the disadvantage of leaving all the rest of the Division for a long time without vaccination; and moreover, in the Canarese districts, those Vaccinators who speak only *Marathi* would be almost useless.

Resumè of Tours.—I concluded my tour in 1858-59 at Churchun in Sholapore Zillah; from thence I proceeded to Punderpore—Sattara Zillah,—and examined the work carried on there in all its stages, and found it good: the lymph in excellent condition, and the Vaccinator himself working better than he had done. Vaccination, too, was more willingly received by the people than has been generally the case in this Division, which is accounted for by the fact that a Vaccinator has been long stationed in this Talooka, and the *Mamlutdar* was the most zealous in the cause of any whom I have met. I thence proceeded to Bembleh Talooka, Sholapore, and on examination of the work, found it by no means satisfactory. I established lymph in two considerable towns—Kurkumb, Timbournee—where there had been previously much opposition. I thence proceeded to Phultun—Sattara districts,—and examined the work of the Vaccinator there stationed, than which nothing could be worse. I laid down a plan by which the work was to be carried on systematically from one end of the Jagheer to the other, and earnestly asked for the assistance of the Chiefs and his Officers, both personally, and the Political Agent; but this plan has not been carried out. Thence I proceeded to Ryhemalpore—Koregaum Talooka, Sattara—and examined the work, and found it good. This closed my tour for the season. I had intended to have visited the Bhore Jagheer, but was prevented by illness.

EASTERN DIVISION, GUZERAT.

Superintendent.—Assistant Surgeon C. J. Ross.

Establishment.—Seventeen Vaccinators.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	20,503	....	5,060	17,920	87·4
1859....	21,871	1,368	....	18,894	86·3

REPORT FOR 1858.

In 1857, 25,563 were vaccinated, and in 1858 only 20,503. The difference in the results of the past and previous year is therefore startling and disheartening, and is due, in no small measure, as was stated in last year's Report, to the suspension of the visitation of the Superintendent. The Vaccinators, however zealous they may have been originally, are apt to lapse into habits of appalling idleness and unconcern, if they are not visited in their districts, and have their work inspected from time to time. The Division has now been so long unvisited, that the Vaccinators, in the continued absence of the Superintendent, have ceased, in a great measure, to take the interest they once did in their work. They need every encouragement, and the expected or unexpected appearance of the Superintendent acted as a stimulus to greater exertions on their part, which has now been in abeyance for three years. The idleness of Vaccinators in the year under review has been unchecked by threats of dismissal and fines, and has effected the unsatisfactory results of the year more than sickness or any other cause, not even excepting the indifference and prejudices of the natives themselves. With reference to the work itself, the numbers vaccinated amounted to 20,503. Of these, 11,826 were males, and 8,677 females. There were under one year 6,308, and 14,195 were above one year. Of the total number vaccinated, 17,920 were successful.

The lymph has generally been reported good and effective. Small-pox seems peculiar to many of the districts at certain seasons, and has been more prevalent and fatal this year than last. Cases of inoculation have not been brought to notice. As stated in a former Report, the main obstacle to the spread of vaccination lies in the ignorance and prejudices of the people. These doubtless will disappear in time, but combined now with the apathy of native officials and the increasing idleness of Vaccinators in the prolonged absence of the Superintendent from their field of labour, they have told most unfavourably, I regret to say, on the results of the year.

With reference to the monthly tours on which so much depends, I have only been able to visit Keem Chokee, Jehungirepore, and Koorsud, in the Surat, and Unclesur, Heenglot, Unclesur, Surnar, Kerwara, Dhaba, and Jambooseer, in the Broach Zillahs. It will thus be seen that I have just begun to break ground in the most important part of the Superintendent's duty, and from what has already been said on the subject, I anticipate for next year greater results than have hitherto occurred since my appointment to the Eastern Division, Guzerat.

REPORT FOR 1859.

In 1858 there were 20,503 operations, and in the year under review there were 21,871, or an increase this year over last of 1,368. A greater increase than is now shown would have appeared, if the Establishment had not been short-handed. The difference in the comparative numbers vaccinated by each Vaccinator is more striking than I expected. I looked for greater equality, in consequence of the promise which I made that I would give the sum of Rs. 50 to him who vaccinated the greatest number above two thousand. I am disappointed to say that one man, and one man only, accomplished the number in question, and that he merely exceeded the requirement by sixty-four. The stimulus of a pecuniary reward has most signally failed in improving the returns from this Division. I am, however, inclined to believe that a permanent impulse might be given to the work, if Government were to promise a retiring pension to Vaccinators whose average number of operations amounted, after a given number of years service, to a certain sum. Of the total number vaccinated, 12,347 were males, and 9,524 females. The age of the majority vaccinated was above one year. There seems an unwillingness, perhaps prejudice, on the part of parents to have their children vaccinated at an earlier period. The successful cases numbered 18,894.

During the year the lymph has proved, and still continues good. But few cases of Small-pox have occurred; those mentioned in the Returns of March and April, took place in Kupperwunj in the Kaira, and Ahmode in the Broach Collectorates. Reports that inoculation is practised in the Division, seldom or never reach me, and I would fain hope that vaccination is slowly, yet surely, making progress.

During the year, I visited all the Vaccinators in the Division, with the exception of those in the Rajpeepla and Rewa Canta States. I had every reason to be satisfied touching the practical knowledge each possesses of his work. There is, however, an amount of idleness which has still to be got rid of. As to the best means of diffusing the benefits of vaccination, I have, in conversation with the more intelligent natives, been astonished to find that some of them made use of an argument, identical with that mentioned in *Southey's Common-place Book*, page 394, which was adopted with good effect by the Bavarian Government, and is as follows:—"The Bavarian Government commands all parents to vaccinate their children before they are three years of age, unless they prefer to pay a fine which increases annually with the age of the child." In 1811, the edict was removed. It had almost banished the Small-pox which used to be very destructive. Some such measure, if adopted in India, would be certain to fulfil the wishes of Government, so far as vaccination is concerned.

WESTERN DIVISION, GUZERAT.

Superintendent.—Assistant Surgeon R. T. Thorp, M.D.

Establishment.—Fifteen Vaccinators.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	20,804	....	8,053	18,481	88·8
1859....	20,802	....	2	18,693	89·8

REPORT FOR 1858.

THE total number vaccinated during 1858 has been 20,804. In the year 1857, 28,857 were vaccinated, showing a decrease of 8,053; to be accounted for by the disturbed state of the country, and the unsettled disposition of the people. The average number vaccinated by each Vaccinator is about 1,386, which is rather low, and an average of 1,500 I hope eventually to obtain. About 63·0 per cent. of the vaccinated were under one year of age, and about 37·0 above. The proportion of females to males is 87·2 per cent., and the percentage of successful cases 88·8. Unsuccessful cases are most probably due to re-vaccination, or to vaccinating those who have had the true variola, but on whom no traces either of the disease or prophylactic are visible. In the districts visited, I have found both the lymph and vesicles to be generally good. There is often a great difference in the perfectness and size of the vesicle and areola in the same village, which is unaccountable, as it happens on children of the same caste, age, and apparently in equally good health, and at the same time the operation is performed, yet in one will be the perfect pearl on the fresh-rose petal, and on the other an insignificant pustule, with scarcely any areola, or a large pustule with broad inflamatory areola; both of the last form sores which are often difficult to heal. The Vaccinators often get a bad set of operations by vaccinating during the heat of the day, or from lymph nine or ten days old, when the vesicle has begun to decline, and the areola is faded. I have always fined those who have thus transgressed, because sore arms, or an operation from which benefit should be, proving futile, or a source of annoyance beyond the week or ten days the parents are told the child may be ailing, tends to cause the operation to be shunned altogether, or, at the least, to be thought light of; the lymph often improves by being changed from one district to another, and even from one part to another of the same district. During the past year, variola has been very prevalent, though not reported by the Vaccinators as truly as it should have been. I cannot discover that inoculation is practiced in any district of this Division. I am not aware of any means by which the benefits of vaccination can be more effectually spread in this Division, until the people of themselves learn to understand its true purpose. At present some avoid it, because of a fear that their caste may be injured by the inoculation of the blood of some unclean animal; others imagine that it is a form or ceremony of the Christian religion, and that therefore they must have nothing to do with it. Explanations or arguments, however urged or brought forward, avail nothing; the only one they seem fully to understand is, that it is by the order of Government, and therefore every parent is bound to have his child vaccinated,

In examining the Register of the Vaccinator and those operated on in any village, my usual custom is to collect the children with their parents, and calling out the names as they are in the book, or the Telattee or Mooknee calls out the names as in his list; then each parent, if present, answers to his name, and brings the child, whose arms are examined; if not present, and unable to be so, the reason is entered, and the next name called. After the whole list is thus gone through, conversation on the healthiness of the village during the last two or three, and sometimes as far back as ten years is discussed; the soil and productiveness of the land: what grain or produce the land is best adapted for; if water is plentiful, also if it is sweet or brackish; and if any are ill, I go to see them, and prescribe, telling the name of the medicine or drugs employed, and the quantity used; I also inquire of the native modes of treatment for the most common diseases, and the medicines in vogue. Vaccination, its history, and use, forms a lively topic of conversation; but the natural suspicious character of the native mind is shown, by the common question "are you quite sure that the Government do all this, and spend so much for kindness to us only, and that they derive no benefit from it."

I received charge of the office on the 15th of January, and in February I visited Dholera, Maveh Ghoga, and Bownuggur. In April I was recalled to Ahmedabad, where I was employed on military duties till the end of May. During the rains, I took advantage of those days in which travelling was practicable to visit the villages of the Northern and Western Divisions of Dholera, until I was ordered to Baroda in August, where I staid till the beginning of November. About the midde of that month, I began my present tour, commencing at Sunnund and thence to Verumgaum, Mandall, and Radhunpoor. I generally stay twelve or fifteen days in each district, so as to examine ten or twelve villages, of which the Register has not been examined during the preceding two or three years.

In the past year, I have endeavoured—*First*, to make the Vaccinators employ themselves more fully than heretofore in the service for which they are paid. In this I have partially, and will eventually entirely succeed. *Secondly*, to have the means of testing the weekly and monthly Reports, as I found that they seldom if ever agreed, and in this I have done most satisfactorily. *Thirdly*, to obtain the visible support of the Civil authorities, as a guarantee of the Vaccinator being a Government servant, by the assistance of a Peon from the Mamlutdar's office, during the weekly tour of the Vaccinator. This is an actual necessity, as the only way of obtaining the aid of the Mookhee, Tellattee, or some other native official in the villages; and without the assistance of one of these, those vaccinated in the preceding week could not be collected, so neither could results be known, nor would it be possible to take a child, not to say children, as is often necessary, from one village to another, as the parents are not paid for the loss of their day's work. There are Rs. 100 allowed by the Government for the payment of these people, but I have not heard that the allowance has ever been drawn, neither do I know how it could be made available for the purpose it is intended; for, if the sum was divided amongst the Vaccinators, their pay would be increased thereby; but the benefit to those for whose remuneration it is intended is not obvious, honesty not being a trait in the native character, if there is any gain by a fraud in which detection may be evaded in any way.

I beg respectfully to bring the following suggestions to the notice of my superiors:—

1*st*.—That, although the Vaccinators require but too frequently a spur to be careful and industrious by a fine, which is at the discretion of the Superintendent, yet he has no means at his disposal of rewarding those who are industrious and zealous, which would act equally as a stimulant, whether the amount of the fines would not be well and profitably bestowed for that purpose.

2*nd*.—That, as it is desirable to know the percentage of those vaccinated to the children born, whether a copy of the Register of Births, sent from the districts to the Collector, might not with advantage be forwarded to this office.

3rd.—To prevent, as far as possible, any false names being entered in the Register by the Vaccinators, and at the time of examination having them reported as "dead," whether a copy of Mortuary Returns, sent to the Collector by the authorities in the villages, would not only be useful, but is absolutely necessary for the detection of such a fraud.

4th.—That, as at present the Mooknee is required to attest and certify by his signature or mark—for many of them can neither read nor write—that a stated number has been vaccinated in this village during the past month, as set forth in the list he or the Telattee is supposed to have taken—I say supposed, because, although the order is for one of them to have kept a Register of those vaccinated in the village, yet not a third of them even take a copy of the Vaccinators' Register, which is itself contrary to order, and the purpose of the intended check on the Vaccinator being frustrated thereby, the said list should agree in every particular with the Vaccinators' monthly Return,—whether it would not be advisable for each Mooknee or Telattee to forward a list, or the copy of the list kept by one of them, to the Collector or Superintendent of Police, by whom a copy could be forwarded to the Superintendent of Vaccination, who would thus have the means of testing the correctness of all the Reports received from the Vaccinators; and

5th.—Whether the Foujdar or Mamlutdar of each district or purgunna should not be instructed to collect all those vaccinated since the last inspection by the Superintendent, at such a time as the Superintendent may visit any town or village for that purpose. I am sometimes two or three days collecting the whole of those vaccinated during the preceding year, and in one case I failed, although there were collections twice daily during three or four days; for, as the actual inspection by the Superintendent is absolutely necessary to prevent false entries, and to ensure that the operation has been properly performed, so, to prevent delay, and to enable the collecting of those operated on to be carried out, it is absolutely necessary that the Civil and Police authorities be ordered to co-operate in assembling those present in the town or village, whose names are in the Vaccinators' list, otherwise the Vaccinators may forward Returns of which not ten per cent. would be true, and thus the good intention of the Government be totally frustrated.

REPORT FOR 1859.

THE total number vaccinated during the year has been 20,802. In 1858 there were 20,804 vaccinated, so that there is very little difference between the Returns of 1858 and 1859. The percentage of those under and those over one year of age is 68·2 to 79·0. The number of doubtful cases is less than in preceding years, proving, I hope, that the parents are not so timid and prejudiced against allowing lymph to be taken from the pustules on the arms of their children, as was formerly the case.

The lymph is by all the operators reported well of, though the Apothecary in charge at Gogo found the pustule small; but the size of the pustule, unless very small, is not, in my opinion, any criterion; the colour of the ripe pustule—a pearly white,—with moderate areola going through the regular stages, dying cleanly and dryly, and leaving a good cicatrix, being the result and true sign (test) of good vaccine lymph. The only place where I have found the lymph not good is lately in the Mahee Canta, and I will cause a supply of good lymph to be taken from the neighbouring district of Morassa.

During the past year I have not heard of any Small-pox, except at two villages in the Gonghur district, and at Burwalla, in the Dhundooka district; in either case, if it existed at all, it was confined to the villages named. From inquiries made by myself at Gonghur, Dholka, and Dhundooka, the truth of the report was denied; and in the villages of the Gonghur district, the Mooknees said that two children had been ill with a rash, supposed to have been Small-pox, but that none caught it from them. The only obstruction to the spread of vaccination is in the superstition and credulity arising from the ignorance of the natives' want of faith in, and suspicious regarding anything done by, the English. An adult Dher refused to be operated on, although he had never been inoculated or had had the Small-pox, of which he said he was in great dread; and when asked to give the reason for his antipathy to the prophylactic, stated "that he had heard it asserted the Government would take the Caste from all in India; that vaccine lymph was originally pus, taken from the sores of the bones of a dead man, so, of course, one of the means employed to destroy Caste." Nothing more ridiculous or improbable than this could have been promulgated; yet this man, and I have no doubt thousands implicitly believe it as this man evidently did, so that any benefit bestowed under the auspices of Government is, however patent the good effects, looked on with suspicion by all classes of natives. No argument or exposure of the nonsense in the tales spread alter the facts as they deem them. The only means by which vaccination will become universally received are either—*First*, by gentle coersion of all classes with the indisputable—being self-evident—patronage and support of Government, through the Native authorities in the districts. [This is not afforded as it should be, in giving assistance to the operator by a Peon, or in punishing Mooknees and Talattees, who do not help to the best of their authority and ability, but, as is often the case, absenting themselves, and even taking away the village Havildar on the day known to be the one for the Vaccinator to visit the place.] Then, that vaccination does prevent the ill effects of Small-pox—as I have often heard natives say—will become a received fact; the suspicion on account of caste will die; and the prophylactic become duly appreciated and sought after; or *Secondly*, to wait until education shall have opened the eyes of all classes of natives to the beneficence and disinterested kindness of Government, and the value of vaccination. But this is to my mind a hypothetical epoch, not likely to occur in this century. Giving pensions to all according to service, or increasing the pay of the operators, and giving subsistence money to probationers, would have the effect of bringing a better educated class of natives into the Department; but I do not think that any permanent increase in the number of operations would be gained. Pensions are, without doubt, expected by many of the senior operators, who, for thirty or forty years, have faithfully served the Government.

During the past year, I visited the districts of Radhunpore, Kuttoosun, Pethapore, Bawissee, Jeytulpore, and Dhundooka in succession, as named, returning to the Sannud district on the 7th of June, where I was employed till the rains drove me into Ahmedabad. With the office in the city, I visited villages in the Eastern and Western Divisions of Dorkroee, occasionally, as the weather permitted, going to villages in the district of Sannud, until I was sent to Rajcote in July; there I was fully occupied in civil and military duties, until permitted to return in October. In December I left Ahmedabad and proceeded *viâ* Vullud, Pethapore, and Leembodra to Maurissa, where a candidate was employed, the Karkoon having resigned his appointment. I staid there, visiting the villages and Chiefs, inspecting work previously done, and superintending the vaccinating operations then going on; then I moved to Sadra, whence I could continue to overlook the work of the candidate, who, although very zealous, was a novice in his duties, whilst I was able, at the same time, to carry on vaccination in the bazar of Sadra.

SIND DIVISION.

Superintendent.—Assistant Surgeon T. E. P. Martin.

Establishment.—Fifteen Vaccinators.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	47,130	6,353	....	45,155	95·8
1859....	49,525	2,395	....	48,843	98·6

REPORT FOR 1858.

THE total number vaccinated during the year 1858 is 47,130, which, compared with 40,777—the result of the previous year 1857—gives an excess of 6,353 in the past over the previous year. The marginal table represents the progress of vaccination in Sind during the last six years—from 1853 to 1858 inclusive; and it will be seen that, during the last two years especially, a very considerable extension of vaccination has been effected amongst the population of this province, the excess of the average of the last two over that of the previous four years being 27,345. Large as the result of the two last years may appear when compared with that of the preceding years, it is considered that it in no respect represents the amount of vaccination that might be effected in the province with a larger organisation of means to carry it out. There still remain large areas where vaccination has yet to be introduced.

Years.	Total number Vaccinated.	Years.	Total number Vaccinated.
1853..	6,017	1856..	15,551
1854..	23,457	1857..	40,777
1855..	20,807	1858..	47,130

The comparative work of Vaccinators exhibits considerable difference in the success of individuals. There are a few Vaccinators who have attained an excellent knowledge of their work—not of the manual operation merely, though in that there is marked difference where large numbers have to be vaccinated, but in the equally important art of enlisting the aid of Mookies, Zemindars, and subordinate executive officers where they have to carry out work. These men always have good returns; rarely make complaints of want of help; and if difficulties present themselves, try to overcome them, and generally with a considerable amount of success. There are other Vaccinators who cannot be reported of so favourably; their work is always moderate; they have little energy or tact; constantly complain of want of help; and, in fact, have only genius enough for the mechanical operation, which, however, they perform carefully and well. The difference of qualification thus described is well marked in this Establishment, and will serve to explain the disparity of work of individuals. It is right, moreover, to remark that two or three other Vaccinators, whose returns are the least favourable, have suffered a good deal from fever. One Vaccinator has been discharged solely on the ground of ill-health—a very serious disqualification when the really hard work Vaccinators have to perform in this province is considered. The Vaccinator appointed to succeed him has recently died, after a very short incumbency, much to my regret, for he gave promise of very superior qualifications for the work he had to do.

Of the total number (47,130) operated upon during the year, 28,656 were males, and 18,474 females. Very few Christians or Parsees have been vaccinated, the numbers being 15 of the former, and 23 of the latter. The number of Mahomedans, as compared with Hindoos, is very large, 38,657 Mussulmans having been vaccinated, whilst of the Hindoos only 7,252 came under the operation. The population of Sind is mainly a Mahomedan population, in the proportion of 4 to 1, as stated in the Government Records, and this fact will serve to explain the preponderence in the return of Mahomedans over Hindoos. As to the age of those vaccinated, there were 14,616 cases under one year, and 32,514 above this age. Adult vaccination is never practised, except at the request of the individuals. I only remember to have seen three or four cases during the year. Of the number above one year, the great mass, as far as I have had an opportunity of judging, has been under eight years of age. As to the result, of the total number vaccinated (47,130), there were 45,155 cases reported as successful, giving a percentage of 95·8. The number reported as successful includes cases which had primarily failed or were doubtful, but have been subsequently re-vaccinated with success. With the constant use of fresh lymph, failures are of very rare occurrence. I have been frequently surprised at the amount of success on inspecting a large number of cases. Vaccination from glasses is generally unsatisfactory; a few of the older Vaccinators only can be relied upon for a successful result with lymph taken in this way. The lymph and vesicles have, throughout the year, preserved their characteristic appearance, and continue very good. I have found no difficulty in preserving the quality of the lymph through the hot weather. I was employed during the last hot weather, and what is called the rains—though there were only two or three days on which rain fell in the parts of the province where I happened to be—in the upper part of the Shahbunder districts, in the Mahomed Khan's Tanda districts, and in the Meerpooghass districts, from April until October, and during the whole of the time the vesicles were quite as good as in the cold weather, and there was no case, amongst the great number inspected, in which any inflammatory or other unpleasant symptoms were noticed. Small-pox in its epidemic form has not made its appearance during the last year; a few cases have occurred in the Shahbunder districts in the early part of the year, and more recently three cases have been reported in the Sanger Kardarate, Merepoor Kass districts. Inoculation is still occasionally practised, but the operations are unfrequent.

With reference to the more effectual spread of vaccination, all other considerations merge in the great one of the insufficiency of the means to the end. Sind is too large a province for the present, or for any ordinary Establishment that Government might be pleased to sanction to carry out vaccination thoroughly. A single Kardarate affords ample work for one man for a year. Each district in Sind has several Kardarates; and until two or three Vaccinators can be entertained in each district, in addition to the present Government Establishment, vaccination cannot be thoroughly kept up; and short of this, Small-pox can hardly be excluded from the province, such exclusion being, I apprehend, the legitimate aid of vaccination.

It is on record that the disease was kept out of the kingdom of Denmark for years by the efficient practice of vaccination; but that, on some relaxation taking place in the vigorous working of the measure, the Small-pox again made its appearance. With an instance of this kind authenticated, it is not too much to expect that in Sind similar favourable results might follow a parallel course of procedure. Wherever I have made inquiries, it has resulted that the Zemindars are favourable to such a measure. With reference to vaccination, in which only I have a direct interest, it is my entire conviction that the people themselves should be induced to pay for a benefit as direct in its effects as any other sanitary object for which municipal taxes exist, as sweeping the streets for instance, or cleaning and repairing sewers and drains. Laying aside, however, the exclusion of a fatal disease, the great aim of vaccination, as an object unattainable under existing arrangements, I would beg to represent

that the present Establishment can do, and is doing, a great deal to extend protection to the population of the province.

On reviewing the work of the year, it gives me the utmost gratification to be able to say that the successful working of the Establishment is, in a great measure, due to the assistance and countenance of the Collectors and Deputy Collectors of the province. No complaint has ever been made to me as to the intemperate conduct of Vaccinators, and my belief is, that they are carrying on the work in a way which, far from rousing the prejudices of the people, is likely eventually to disarm them.

REPORT FOR 1859.

THE total number vaccinated during the year 1859 was 49,525. In the year 1858, there were 47,130 operations. This number shows an increase in the work of 1859 as compared with that of 1858 of 2,395. During the year under report, there were vaccinated 28,891 males, and 20,634 females. Of these, under one year of age, 12,022 were operated upon; 37,503 above this age. Owing to the prevalence of Small-pox during the early part of the year in the Sakra Talooka of the Jerruck districts, and to the fear the prevalence of the disease and the numerous deaths from it occasioned, a considerable number of adults—men and women—were vaccinated at their own request. With this exception, adult vaccination has been rarely practised, and in no instance but at the special and earnest request of the individual. The result of the operations of the year gives 48,843 successful, 309 unsuccessful, and 373 doubtful cases. The number of successful cases (48,843) compared with the total number vaccinated during the year (49,525), gives a percentage of success equal to 98·6. This percentage of success does not represent the result of the primary operations. During regular work—the Vaccinator settled in his district with a good supply of lymph,—it is a very rare event to see an operation fail completely. The number of vesicles differ. In a fair proportion, there are six vesicles corresponding to the number of punctures made with the lancet; some may have four, others two or three, or, as occasionally happens, only one good vesicle, the others, in the great majority of instances, becoming a sacrifice to itching fingers, or to carelessly-applied clothing. When it happens on an emergency that Vaccinators are taken away from their regular work—and a visitation of Small-pox this year constituted such an emergency,—there is always some difficulty, on their return to their districts, to secure the same successful result from lymph on glasses, or from crusts, which they are sometimes obliged to use. A considerable number of such cases have to be operated upon twice, occasionally even thrice, before success is apparent. In ordinary work, failure is very unfrequent; but failure on re-vaccination is even less rare in proportion.

The vaccine lymph has not, in any way, deteriorated during the year, and continues very good. Epidemic Small-pox prevailed for three or four months in the early part of the year in the Sakra Talooka of the Jerruck districts. In two villages—Ghoolam Lahi and Otar—the disease had been very fatal, several adults having fallen victims to it. In the former village, as far as could be gathered from inquiries on the spot, there had been sixty-five cases, and twelve deaths. In several other villages also, the disease made its appearance, but in fewer cases, and with less fatal results. The people were alarmed, and several were reported to me as having left their homes to escape the danger. Several Zemindars came to me to request very earnestly that their villages might be protected by vaccination. To take advantage of this unusual and very favourable state of things, several Vaccinators were collected to extend protection as rapidly as possible. Whole villages—men, women, and children—eagerly sought and received the protection of vaccination. It was a favourable circumstance, in the interests of vaccination, that, in both the villages where Small-pox was exceptionally

severe, a few children had been vaccinated sometime previously in another part of the province, their parents having recently come to reside in these villages. The cicatrices in their arms left no doubt of the fact of their having been properly protected; and all these children, without a single exception, escaped the disease. Children and adults all around the houses occupied by these cases of protection were seized with Small-pox, one after another; but they escaped scatheless. This kind of trial continued for three or four months; and as a practical instance of the good resulting from vaccination, nothing could have been more opportune, no other circumstance could have so favourably influenced people of all kinds—those having active prejudices, and those merely indifferent. All classes of people within the influence of the disease were glad to accept vaccination, and ready to praise the benevolence of the Government which had provided it for them. The impression of its advantages took so decided and practical a shape, that the principal Zemindars of the Talooka offered voluntarily to maintain a Vaccinator, who might also administer medicine for fever and for the common ailments to which they are subject. It has been an object of the greatest interest with me, and continues to be so, that, if possible, some means, additional to the Government Establishment, should be entertained to vaccinate, and to distribute quinine and some of the simpler medicines to the people. My mind has been fixed on this consideration, from the fact that there is an immense amount of disease, principally fever, which remains untreated in the province. The natives have no remedy for fever. Their applications are not only generally senseless, but occasionally barbarous.

Reviewing the work of the year, it may be said that there is a great deal of good feeling, on the part of the people, in favour of vaccination. If there has been any difficulty, it has usually, on inquiry, proved to be from some cause either temporary or capable of removal. The Mahomedan Mofussil population, as a rule, receive vaccination readily. The number is increasing of those who bring their children from a distance to be vaccinated, rather than forego the benefits of the operation. The Hindoos, as a people, can hardly be reported on so favourably. In the agricultural villages, where there are very few of them, they bring their children with great readiness, sympathising apparently with the genuine willingness of their Mahomedan neighbours. In large towns, prejudices are stronger, and often not to be overcome on the voluntary principle, which is the rule of action throughout the province. I have the greatest pleasure, in conclusion, to attribute much of the success of vaccination in Sind, to the very kind and liberal assistance I have at all times received at the hands of the Civil authorities of the province.

VACCINATION IN THE NATIVE STATES.

SOUTHERN DECCAN DIVISION.

Sixteen Vaccinators—under the Superintendent—stationed in the Kolapore territories, and in the Collectorates of Sattara, Belgaum, and Sholapore.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	10,275	1,552	....	9,662	94·0
1859....	9,900	....	375	9,121	92·1

REPORT FOR 1858.

THE total number vaccinated in 1858 is 10,275 against 8,723 in 1857, showing an increase of 1,552, or 17 per cent. This is entirely due to the improvement in four of the Belgaum Jagheers, viz. Sanglee, Meeruz, Kajwar, and Moodhole. The unsettled state of affairs in the Jumkhundee Jagheer, has prevented a similar improvement from taking place there.

The proportion of males to females is 47·5 per cent. against 47·0 per cent. in 1857. There would seem to have been a prejudice at first against allowing female children to be vaccinated, which is now overcome, as, from 1853 to the present time, the proportion of females has constantly increased. The number "under one year" gives a proportion of 27·7 per cent. against 24·4 in 1857. The proportion of successful operations has again increased, being 94 per cent. against 93·1 in 1857. The condition of the lymph and vesicles has been good throughout the year, and no inoculation has been reported. Small-pox has prevailed throughout all the Jagheers more or less. According to the report of the Vaccinators, it was epidemic in Akulkote—Sholapore—in April and May, and in Moodhole—Belgaum—in April. In the Kolapore States it was very prevalent in the months of January, February, and March, but not in so severe a form as is indicated by the returns from the Collectorates; 3,331 cases are recorded, and 410 deaths, or about 12 per cent.

Regarding the extension of vaccination, I have little to suggest further than the necessity of constantly urging on the Chiefs, and those in authority under them, to give all the assistance in their power, by making their people acquainted with the objects and advantages of vaccination, and by seeing that the village authorities do their duty in helping the Vaccinators to procure children, and duly confirming their reports. I am fully convinced that frequent visits to the Native States' Vaccinators by the Superintendent, are quite as beneficial as to Government Vaccinators. Such visits have the effect of showing practically to the people that the Government has no hidden object in promoting vaccination, and, for a time at least, a healthy stimulus is given to the work. The present feeling among the Chiefs seems to be favourable, and I have no reason to think that any impediment has been caused by the decision come to by the Government in 1857, of leaving the direct communication with the Vaccinators in the hands of the Chiefs themselves, rather than with the Superintendent.

REPORT FOR 1859.

SIXTEEN Vaccinators have been employed, distributed as follows :—4 in Sattara, 5 in Kolapore, 6 in Belgaum, and 1 in Sholapore.

There has been a slight decrease in the number vaccinated during the year, the number being 9,900 in 1859 against 10,275 in 1858, showing a decrease of 375; the principal cause has been cholera in some of the districts.

The average number vaccinated by each Vaccinator is 619 in 1859 against 642 in 1858. In the Kolapore States alone does vaccination make any satisfactory progress. In the Sattara and Belgaum Jagheers, it is neither received by the people willingly, nor do the Chiefs take any interest in its diffusion. In the Sattara Jagheers, the Vaccinators themselves are careless to a great degree; and the Chiefs and their Karbaries, though promising all assistance when I am present, do so without any intention of performing their promises. The same may be said of the Belgaum Jagheers, the state of things in Jumkundee, Koorundwar, and Moodhole being particularly unsatisfactory.

There is hardly any change in the proportion of females to males, being 47·3 in 1859 against 47·5 in 1858. In respect to age, the proportion "under one year" is very nearly the same as in 1858, viz. 27·5 in 1859 against 27·7 in 1858. The percentage of success is less than in 1858, being 92·1; but this, I think, arises from the gradual giving up of the practice entertained by some Vaccinators of recording only successful cases.

In the number of "other castes vaccinated," there is a very decided improvement, being 480 in 1859 against 315 in 1858, and 155 the average of the six previous years. The condition of the lymph and vesicles is good. Lymph has been occasionally lost through carelessness and other causes, but has at once been replaced. Small-pox prevailed more or less in Jagheers in the months of March, April, May, and June; but I have not the means of ascertaining to what degree, as it is only from the Kolapore States that quarterly Returns are sent.

An experience of two-and-a-half years has satisfied me that very little progress must be looked for, as long as the control of the Vaccinators is in the hands of the Chiefs themselves. There is hardly one of them who takes the slightest interest in the extension of vaccination. They entertain Vaccinators, because it is the desire of Government that they should do so; but there it would seem they consider their duty in the matter to stop. All attempts to induce them to carry out my arrangements, either by personal interviews or through the medium of the Political Agents, have failed. Everything is promised, but nothing is performed. In the Kolapore States alone, as before stated, does vaccination make anything like satisfactory progress.

EASTERN GUZERAT.

REWA KANTA AND RAJPEEPLA.

Under the Superintendent Eastern Division.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	5,846	....	1,910	4,548	77·7
1859....	4,774	....	1,072	3,672	76·9

REPORT FOR 1858.

THE total number vaccinated amounted to 5,846, being a decrease of 1,910 from the former year. The decrease is due to the causes explained by the Superintendent in his Report of Guzerat, see page 21 ante. There were 2,882 males, and 2,964 females vaccinated. Under one year of age 1,256, and above 4,590. The percentage of sucess was 77·7.

REPORT FOR 1859.

THE total number vaccinated was 4,774, being a considerable falling off even from last year, but which is not explained by the Superintendent.

WESTERN GUZERAT.

MYHEE KANTA AND PALHUNPORE.

Under the Superintendent North-Western Division.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	13,693	....	1,596	11,544	84·3
1859....	14,511	818	....	12,520	86·2

REPORT FOR 1858.

THE total number vaccinated during the year has been 13,693. In the year 1857, 15,289 were vaccinated, so that the decrease amounts to 1,596. This is to be accounted for by the disturbed state of the country, and the unsettled disposition of the people. The average number vaccinated by each Vaccinator is about 1,369. Only about 52 per cent. are under one year of age, owing to the unfrequency of the Vaccinators' visits in the large districts allowed to each Vaccinator. The proportion of females to males is 93·5 per cent., and the percentage of success about 84·3 per cent. This large percentage of unsuccessful cases is owing to the Vaccinators' districts being separated by the intervention of other States, so that one part of the charge is eight or ten koss from the other. The Vaccinator leaves one part of the charge without ascertaining the result of his last operations, but enters them in the Register as "doubtful."

REPORT FOR 1859.

THE total number vaccinated during the year has been 14,511, against 13,693 in 1858, or about 818 more, which, I hope, is but the beginning of a steady increase. The percentage of those under and over one year of age is nearly equal—about 50 per cent.

NOTE.—The remaining remarks by the Superintendent will be found embodied in the Report of Western Guzerat at page 25 ante.

KATTYWAR CIRCLE.

Superintendent.—Assistant Surgeon R. G. Lord, M.D.
Establishment.—Eight Vaccinators (Government).
Nineteen Vaccinators (Native Chiefs).

[Whilst vaccination was an experimental measure in Kattywar, the Superintendent furnished a Report each half-year to Government as well as the Departmental Annual Report, and from both these sources the following Reports have been derived.]

Establishment.	Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government	1858....	4,289	1,716	....	3,674	85·6
	1859....	4,744	455	....	4,287	90·3
Native Chiefs...	1858....	9,572	3,734	....	8,392	87·6
	1859....	13,359	3,787	....	11,992	89·7

REPORT FOR 1858.

A REFERENCE to the records in the Civil Hospital at Rajcote shows that ten years ago, and for some time anterior, the only means for diffusing vaccination in the districts of Kattywar, under control of the Political Agent—comprising an area of 20,000 square miles, with a population of about a million and a-half,—consisted of two Second Assistant Vaccinators under the Civil Surgeon of the Agency. This state of things appears to have continued so late as till September 1853, when, in consequence of the indifferent character of the Vaccinators, repeatedly reported by the Civil Surgeon, and the unsatisfactory state of vaccination generally throughout the province, it was resolved to discharge the two Assistants, appoint a Station Vaccinator for local duty under the Civil Surgeon, and transfer the district charge to the Superintendent of Vaccination in the Western Division of Guzerat, augmenting his Establishment so as to admit of his detaching a portion of it to Kattywar. The principal Native Chiefs were, at the same time, invited to keep up Vaccinators, trained by the Superintendent, for their own districts; and a few of them agreed to do so. The scheme, however, did not seem to succeed. Some of the Vaccinators were discharged; others, though continued, were not trusted or encouraged; and at the close of 1856 the strength of the Native Chiefs Establishment was actually lower than in the earlier periods of the experiment. The strength of the Government Establishment was at the same time six; but these men were generally employed in large towns, the Chiefs of which could afford to keep up Vaccinators for their own people. The amount of work thus placed within reach of the Government Vaccinators was considerable; but their number was quite inadequate to the extent of country for which provision had to be made. No more hope seemed forthcoming from the Chiefs, and the Political Agent did not hold out much hope of any increase. The demands for the Superintendent's presence in other portions of his too extensive Division, which put it beyond his power to devote as much personal attention to Kattywar as its extent, perhaps, demanded; and from his residing generally at Ahmedabad, and his subordinates being

mostly natives of that part of Guzerat, they were looked upon as strangers in Kattywar, and a distrust felt in their motives and operations. This was in some instances overcome, but in others never ceased to operate. The vaccination regulations too, as carried out in the Government districts, and other portions of the Ahmedabad Division, were not considered by the Political authorities, if enforced to their full extent, as calculated to gain the co-operation and good-will of the people here, who seem exceedingly jealous of any interference with their authority. A consideration of these and other circumstances, submitted to Government in a lengthened correspondence, and by Government to the Medical Board, led the latter to express an opinion that some improvement in the existing system in Kattywar was called for; and Government, in their Resolution of the 28th March 1857, decided on appointing the Civil Surgeon in Kattywar, Superintendent of Vaccination in that province, according to the terms specified in the Resolution. This was subsequently confirmed by the Supreme Government for a probationary period of one year. Under this sanction, and pending permanent confirmation, a distinct Superintendent's Office, in every respect similar to those kept in the other Vaccination Divisions, has been opened, and all records and returns regularly kept and forwarded since the 1st July 1857. A portion of the Government Establishment of Vaccination in the Westen Division of Guzerat, counting eight subordinates* of different grades, has been transferred for employment in the Kattywar districts. The aid of the Chiefs has been solicited, and will, no doubt, be more freely afforded than hitherto, as their own people are trained for them near their homes, and their duties carried on under the superintendence of the Medical Officer of the Agency, who they know is on the spot, and with whom many of them have opportunities of becoming acquainted. The Government Vaccinators being only a portion drawn from the Ahmedabad Establishment, no additional expense is, on this account, caused to Government; and the Chiefs men being paid by them, we thus have an Establishment equal, I believe, to that in most of our Vaccination Divisions, with little or no extra cost to the State.

Compared with the preceding year, only over the latter half of which, however, our operations extended, the table before given shows a large increase; but this is owing more to the greater length of time to which the returns extend, than to any very remarkable difference in the numbers operated on by each Vaccinator for a like period in either year. The sex, age, and results are numerically noted in the returns forwarded.† The percentage of successful cases is about 85·6 in the operations by Government men, and 87 in the returns by Native Chiefs Vaccinators. The lymph, in most instances where I have been able to examine it, has been found good, and in others the Vaccinators continue to report it so. Small-pox prevailed in many parts of the province in the early part of the year, but as usual declined about April and May. Inoculation does not seem to be practised in Kattywar; and from the painful nature of the operation, as described to have been formerly done by some travellers who introduced it, and the apparent absence of any desire on the part of the inhabitants to have their children subjected to the ordeal, I do not think that it can be considered as in any degree unfavourably affecting the progress of vaccination. The want of ready aid in propagating vaccination is much felt in keeping people up to time, which is often no easy matter. The people are naturally apathetic and given to postpone, and the higher classes, perhaps, set a bad example in their habit of keeping persons waiting, which seems at times to be thought to add to importance. The difficulty then that often besets a Vaccinator is to get parents to bring their children with infection—which they are often averse to do—at the time when the lymph is in the best state for transferring, and to have applicants for vaccination ready at the same time with their children to receive it. In doing this, failures are often experienced, delays occur, till the day has far advanced. In this country, the lymph very soon degenerates and becomes purulent, and by

* Exclusive of the Station Vaccinator borne on Civil Hospital Establishment.

† See Appendix, Tables No. 1 and No. 3.

vaccinating with such matter, irritable sores generally prematurely suppurating are produced, and the Vaccinators' work is obliged to be dropped until fresh lymph can be brought from elsewhere. To get over this disadvantage, and that aid might be always present with the Vaccinators, I was anxious for the services of Peons; but I have not been able to overcome the objections on other grounds that exist to their being employed with the Vaccinators, and must therefore endeavour, by such local means and influence as can be brought to bear, to lessen the frequency of such occurrences as above complained of, and the checks to vaccination resulting from them.

At the close of 1857, I had described my tour as having extended to Nowanuggur on the north-west coast there, and I remained there for some time at the commencement of 1858, and effecting an arrangement with His Highness the Jam, for maintaining two Vaccinators in his districts, I was desirous of obtaining employment for a third, for whom there would be ample work, but did not succeed. From Nowanuggur I marched by Harriand and Joorid, where I found Small-pox had lately prevailed; and as no Vaccinator appeared to have before visited these towns, I had one of the Nowanuggur men sent to carry on operations in them. After this we moved to Lutteepoor and afterwards to Yunkara, in the Mahee Kanta, where the principal Chief in that district came to visit, and promised to keep up a Vaccinator for his talooka, which he has since carried into effect. I next went to Wunkaneer, the Chief of which has received vaccination in his own family, and is favourably disposed towards it; but an arrangement for keeping up a Vaccinator in conjunction with a neighbouring talooka, which I at one time hoped would be effected, has been abandoned, in consequence of a boundary fight, and the unamicable feeling resulting. From Wunkaneer I went to Hulwud and Drangdra, the Chief of which places keeps up two Vaccinators—one for each town and district. At Hulwun I found vaccination in a very unsatisfactory state, and tried to improve matters. At Drangdra and its villages the Vaccinator was working well with excellent lymph; and the feelings of the people and success here attained were very encouraging. At Maytun, where I pitched after leaving Drangdra, I was attacked with fever, but managed to inspect the villages round my camp, and then moved to Luktur, where I found vaccination in a most unsatisfactory state—no interest evidently taken in it by the Durbar, the Vaccinator ill-paid, lymph bad, and work generally at a stand-still. I tried all I could, through the Political Agent, to get matters put on a better footing; but although amendment was promised, no good resulted. At Kudwan, where vaccination has long been carried on, the Vaccinator was in a very bad state of health, which prevented him from going beyond the town. He had, however, kept up his lymph by having children brought to his own house. From Wudwan I visited the Government Vaccinator employed in the Jhallawar district, and who was at the time stationed at Ankhewallia—a village of the Limreebhyad; here he appeared to have exhausted all he could get to do, and complained of want of aid to carry his operations further. The next town visited was Limree, where, as the Chief had no Vaccinator, it was arranged that the above man should be for a time employed, the Durbar assisting him. The Thakoor, at the same time, promised to keep up a Vaccinator for his own people, which he has since carried into effect. At Limree I also endeavoured to arrange with the Political Agent to aid in obtaining assistance for the Government Vaccinator in Gohelwar, who complained of inability to carry on work. The next place I pitched at was Chajka—a village of the Choorabhyad,—around which, and particularly at Choora itself, Small-pox had been very prevalent since the Dewallee. I arranged for the Government Vaccinator to come there after Limree. I then marched for Wulleh, the Thakoor of which has for some years kept up a Vaccinator; here I found the lymph good and appearances satisfactory; so, after having visited the villages, where fresh vaccination was going on, I moved on by Sehore to Tullaja, where one of the Bhownuggur Vaccinators was employed; near this I stayed for sometime, and was able to set the Government Vaccinator for Oond Surweya and the neighbouring small talookas,

to work at Dantha, the chief place in his charge. I then moved on to Mhowa, where I left the Bhownuggur Vaccinator, and travelled along the coast to Channchbunder and Jafferabad, from thence to Roeensa, from which place I went to Dudden, to visit the Government Vaccinator employed in Babriawar, found his lymph good, and endeavoured to obtain him some aid in extending his operations. After this I travelled to Oona and Dilwarra—two large tows in the Joonaghur territory,—where Small-pox had lately prevailed, and the people applied for a Vaccinator to be sent. From Oona marched to Koreenar, in His Highness the Guicawar's districts, and thence to Verawul Vuttun—sea-port towns belonging to Joonaghur; here I found the Vaccinator who had come so far on his way to Oona, but was vaccinating at Verawul, directed him to finish there as soon as possible, and go on to the other district, as the people wished. On the evening of my arrival at Puttun (27th May), I received an order from the Superintending Surgeon to return forthwith to Rajcote and assume charge of the Regimental and Station duties there, which I did on the morning of the 4th June, and was unable for the rest of the year to leave that station.

REPORT FOR 1859.

THE Supreme Government, deeming a fuller trial of the system of vaccination in operation in Kattywar desirable, have again accorded sanction to its being continued for another year, that is, till the end of June 1859, when its working is to be reported on. It is therefore a subject of regret that the exigencies of the Service should have caused a restriction to be placed on the Superintendent's movements for the last seven months of the past year, by necessitating his being employed constantly during that period in doing Regimental and Station duties, so as to be unable, even for a day, to proceed into his districts, in many parts of which his presence would have aided matters much. As a result of this, a slight falling off is noticeable, not only in the number of operations, but also in the strength of Native Chiefs Establishment of Vaccinators, the latter being caused by Chiefs not having replaced men who have been discharged or have given up the service. I may, however, add that the check thus given to our operation is, I have every reason to believe, only temporary, and that, since I have been able to proceed into the districts—which I did on 2nd January,—I have succeeded in arranging for filling up most of the vacancies on the Native Chiefs Establishment, which will complete its strength to about twenty or more Assistant Vaccinators, which, I think, it should always average. The amount of work obtained from the Vaccinators, judging from comparison with what is done in Government districts, appears to me not equal to the means employed; and with the view to improving it, and bringing the Establishment generally under more regular control, I have, from to time time, proposed some alterations in matters of detail, but have almost invariably found that it was considered that the taking of these Vaccinators, as it were, too much into our own hands, and thus making them look to us more than to their own immediate employers, would be a very unwise course to enter upon, and tend to make the system generally unpopular with those to whom we look to pay for and support it. In this view I am oblige to acquiesce, so can only endeavour, through the employers or their agents, to obtain the best returns of work I can from the Vaccinators. For the Government Vaccinators too, as in Government districts, I endeavoured to obtain the assistance of Peons; but this, on grounds already stated in a former report, has been denied. In their stead, and to facilitate the transfer of lymph from village to village, which at present forms one of the difficulties that stand in our way, it is proposed to offer payment, from local funds, to parents who take their children to other villages for the purpose of conveying infection, and thus induce them to go willingly. Of this measure, if sanctioned by Government, trial will be made, and the result hereafter reported.

It is said—let us hope on good grounds—that, by having pursued the course above indicated —both as regards employers and the people who receive vaccination,—we have, in a great degree, succeeded in removing the positive aversion with which people looked on it. The absence of compulsion, which it is stated Peons used in some degree to practice, the countenance given to the movement by their own Chiefs, and the employment of men from among themselves with whom the people are acquainted, as Vaccinators are stated, is what tends so much to secure confidence in the practice. All this I give as stated, and hope the expectations of ultimate success, which it would encourage, may be hereafter realized. It will, at the same time, illustrate the principles on which it is endeavoured to found our practice, the object being, instead of exacting the largest attainable returns of numbers vaccinated, and pointing to these as indicating complete success, to try first and secure the good-will of the people and their rulers for the practice, and then let it work out its own increase amongst them.

In comparing the number of vaccinations with those performed in the preceding twelve months, a moderate increase is observable,which, considering the great disadvantages vaccination in Kattywar has had to contend against in the past year, is very satisfactory, especially as, in consequence of the exigency of the public service, I was recalled to do Regimental and Station duty at the end of May, and not relieved, even for a day, of the charge until the following January. I then moved out at once into the districts; but before the end of February was recalled again to do Station duty, from which I was not freed till towards the close of April, when I again went out, but was unfortunately prevented, by a severe attack of illness, from visiting the Vaccinators in the south-eastern districts, and those employed between them and Rajcote, and was obliged, as soon as sufficiently recovered, to return to that station in the early part of June.

The above circumstances will, I trust, be considered as fully and satisfactorily accounting for the moderate increase, and also, I think, enable us to judge of its probable permanency; for, as the causes arose out of purely temporary exigencies—such as are not again, I trust, likely to occur,—it cannot be reasonably supposed that their effect will be lasting; and from vaccination having held its ground, even to the extent that it has done, there is, it appears to me, much encouragement and hope for its future extension and success. Two of the principal Chiefs in the province—HisHighness the Jam of Nowanuggur and theThakoor of Bhownuggur—have, in their own families, lately received it, as also have many others of influence and respectability. It is much hoped that such a feeling will spread, as on it, more than on over-anxiety evidenced on our part, most probably depends the ultimate and real success of the undertaking. "It is a great secret," to use the words of Sir John Malcolm, "to allow men to be happy in their own way; and what we term blessings become punishments when they are inflicted." There is doubtless a point beyond which over-eagerness in urging the reception of new and imperfectly understood practices or systems tends to retard their acceptance, suspicion and often opposition are excited, and the very contrary result to that intended and desired may be produced. It is often very difficult among petty, but quite independent Chiefs, as in this province, to judge exactly how far interference is wise. Colonel Lang seemed to deprecate it to any extent beyond merely giving them advice, and the fullest insight possible into our motives and objects, and then, as soon as they consented to try vaccination, we placed the means in their hands by instructing a man of their own choice as a Vaccinator for them, and encouraged his free employment among their subjects. Such a cause may not have been, perhaps, that most calculated to obtain in the shortest time the largest returns of numbers vaccinated; but it was adopted by advice of the late Political Agent, as that which his experience suggested as most likely to meet with permanent support, and secure the good-will of all classes of people in Kattywar.

SAWUNT WARREE.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	5,426	....	676	4,257	78·4
1859....	4,135	....	1,291	3,194	77·2

REPORT FOR 1858.

By Assistant Surgeon J. KEARNEY, in Medical charge.

THE number vaccinated during the year has been 5,426, being 676 less than in the previous year. The district is said to have an area of about 1,000 square miles; a population of 162,000 souls; and the number of houses about 28,000, which will give 162 inhabitants to the square mile, and between five and six residents to each house. From the first establishment of vaccination—on 13th May 1844—to 31st December 1858, 73,672 souls have been vaccinated. Calculating in round numbers, this will give a proportion to the population of upwards of 45 per cent. If the percentage of success be taken at eighty, the proportion of successful vaccination to the population will be upwards of thirty-six; that is to say—from the Returns of the past fifteen years,—it may be considered that, at least, thirty out of every hundred persons of the population of this district have been successfully vaccinated. Last month I examined carefully 824 men and boys entered on the strength of the local Corps. I found that 88 had been protected by Small-pox, and 319 by inoculation, making a total of 407 out of 824, sanctioning the statement that every other person was protected otherwise than by vaccination. All the rest had been vaccinated. On examining these people, to ascertain the time when they suffered disease or were operated upon, I found that all those inoculated had been so when children or infants, so that I think we may be justified in considering that at this day a great part of the Warree population is protected. Moreover, when it is shown that thirty out of every hundred have been vaccinated; that out of a body of men not chosen with any reference to protection from Small-pox, every other man was protected, and that chiefly by inoculation, it may be granted that sixty out of every hundred persons in this State are protected from Small-pox. However, in the absence of any distinct census referring to the matter, it must be considered that continued and unwearied industry and perseverance are yet necessary, especially when it is found that Small-pox, in its visit to this locality, can still find its victims; for last year forty-five instances occurred in the Warree and Koodal divisions of the districts, of which seven died.

REPORT FOR 1859.

By Sub-Assistant Surgeon BURJORJEE FRAMJEE.

THE number vaccinated during the past year has been 4,135, which is less than that of the preceding by 1,291. The diminution is supposed to be owing to the comparatively little scope

which there is for work now than previously, when vaccination was established. The condition of the lymph throughout the year has been said to be uniformly good. During the past two months of the year, I have myself noticed the practice of vaccination in the Warree town, and watched its results, and from personal observation, I can assert that the vesicles have been pretty good, though I must confess not so good and well-formed as might be wished,—probably because the children vaccinated are from two to ten years of age, and prone to scratch the vesicles, as well as being not unfrequently covered with itch.

BHOOJ.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully. Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	677	....	527	656	96·8
1859....	161	....	516	138	85·7

REPORT FOR 1858.—By Mr. Sudasew Hemraj.

In the last year there have been 677 persons vaccinated throughout the whole province of Kutch. The number is 527 less than the previous year, showing that vaccination is decreasing in Kutch year by year, and this cannot be ascribed to anything but prejudice and apathy on the part of the people. There is a belief prevalent in Kutch, that allowing their children to be vaccinated would provoke the Goddess which is supposed to preside over Small-pox.

REPORT FOR 1859.

In the last year there have been 161 persons vaccinated throughout the whole province of Kutch and city of Bhooj. This number, compared with that of the preceding year, shows a decrease of 516. From this it will appear that vaccination is not going on in Kutch. The Vaccinators report it is after visiting several villages that they find a few subjects for vaccination, not, however, without great difficulty and persuasion. They say that they do not receive a cordial reception in any of the villages, and they are looked upon rather with contempt than otherwise. The cause was explained in the last year's report. It is to vaccination that these people attribute the severe epidemic of Small-pox that broke out in this country in 1857. I think vaccination cannot be practised in Kutch with success, unless it is made lawful and compulsory on the people.

VACCINATION UNDER CIVIL SURGEONS.

PEINT (NASSICK.)

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	330	25	....	230	69·6
1859....	428	98	....	313	73·1

REPORT FOR 1858.—By Sub-Assistant Surgeon R. SPENCER.

THE Native Vaccinator is diligent in using his best endeavours to procure children for vaccination; and the Mamlutdar has aided, as far as possible, the efforts of the Vaccinator in overcoming the prejudices of the people.

TANNA.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	336	82	....	319	94·7
1859....	235	....	101	204	86·8

REPORT FOR 1858.—By Assistant Surgeon A. V. WARD.

THE number of persons vaccinated during the year was 336, being 82 in excess of the preceding year, viz. 254; 94 per cent. of the cases have been successful. The lymph in use has been of very good quality. The Assistant Vaccinator's conduct has been satisfactory. The prejudices against vaccination among the bulk of the Tanna population continues in full force.

REPORT FOR 1859.

No Report was forwarded, owing to the illness and absence of the Civil Surgeon.

POONA.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	1,236	....	456	970	78·4
1859....	1,460	224	....	1,228	84·1

REPORT FOR 1858.—By Assistant Surgeon J. KEITH, M.D.

BOTH lymph and vesicles were good and successful till the middle of July, when the lymph became inert, and continued so till the end of October, when it was renewed. Since then the lymph and vesicles have resumed their former condition, and have been very successful. Small-pox prevailed in the city, in an epidemical form, from February to July with considerable mortality. After the first heavy fall of rain the epidemic began to decline, and in July and August it entirely disappeared.

REPORT FOR 1859.—By Surgeon G. G. W. MAITLAND.

A GOOD supply of excellent lymph has been successfully kept up throughout the year, and on every occasion that I have had an opportunity of examining the vesicles, they have been found of the true vaccine-pox. The city and suburbs have been remarkably free from Small-pox during the period under report. A few isolated cases, of course, may have occurred, but the disease has not shown itself in an epidemic form.

AHMEDNUGGUR.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	1,349	237	....	1,249	92·5
1859....	986	....	363	855	86·7

REPORT FOR 1858.—By Assistant Surgeon J. G. FRASER, M.D.

THE lymph has always been good, and when the operation is properly performed, it seldom fails to produce a large, well-formed vesicle. The Vaccinator has frequently made the remark that the lymph does not act so readily or effectually in cloudy or damp weather; the hot weather he considers more favourable than any other season. No case of Small-pox has come under observation during the past year. The practice of inoculation does not appear to prevail at Ahmednuggur. No case has come under notice; but several instances in which the Vaccinator was obstructed in the performance of his duty have been brought to the notice of the local authorities.

REPORT FOR 1859.—By Assistant Surgeon A. M. ROGERS, M.D.

I HAVE carefully examined those vaccinated at the Civil Hospital, and discarded as unsuccessful every case which did not present a thoroughly well-developed vesicle upon a well-defined inflamed base—"the pearl upon the rose,"—numbers of which, I feel convinced, would have been placed amongst the "Successful" by an uncontrolled Native Vaccinator. It can be seen how very satisfactory even the percentage obtained is. The lymph has always been good, because invariably taken from a well-developed vesicle. I have myself frequently used it in vaccinating the children of Europeans, and it has never once failed.

The decrease shown in the Return for the year 1859 may, in a great measure, be accounted for by the fact that cholera prevailed in the city to an alarming extent for several months in the year—a visitation from which it was spared in 1858. The inhabitants were greatly alarmed by the presence of the epidemic; many children were carried off by it; and the whole of the native population were so influenced by their superstitious notions, that it was next to impossible, without resorting to most unjustifiable force, to find subjects upon whom to operate. The difficulties which, under ordinary circumstances, the Vaccinator has to contend against, are very great and most trying; in fact, a more disagreeable duty a man could scarcely be engaged in. It is only after the utmost trouble parents can be induced to bring their children to undergo the operation; but after it has proved successful, it is next to impossible to get the children so as to examine the vesicles, and remove from them some good lymph for extending the prophylactic.

SATTARA.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	2,116	883	....	1,818	85·9
1859....	2,016	....	100	1,725	85·5

REPORT FOR 1858.—By Assistant Surgeon M. MACKENZIE.

DURING the past year (1858), the Assistant Vaccinator has carried on operations in the town and in nine of the neighbouring villages, the aggregate population of which amounts to thirty-three thousand of all ages. The lymph has been good; the vesicles healthy, but small. The periodical introduction of fresh virus seems to me very desirable towards the end of the cold season. Small-pox has not existed in the town or neighbourhood. I am not aware of any obstructions which have tended to impede the progress of vaccination, nor do I believe that inoculation exists within the range of my operations.

REPORT FOR 1859.—By Assistant Surgeon M. MACKENZIE.

THE vaccination in Sattara and the neighbouring villages, during the past year, numbered 2,016, which, although it shows a decrease of 100 from that of last year, is nevertheless wonderfully large, considering the great prevalence of cholera in and about Sattara in the months of May, June, July, and August. When such diseases as cholera break out, a sudden panic seems to strike the natives, and it is with great disrelish they allow vaccination to be carried on. There have been no cases of Small-pox in Sattara or the neighbouring villages; and every aid has been afforded to the Vaccinator in the performance of his duties; nor do I hear of any cases of inoculation being practised.

SHOLAPORE.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	1,355	....	233	1,207	89·0
1859...	1,405	50	....	1,190	84·6

REPORT FOR 1858.—By Assistant Surgeon C. J. SYLVESTER, M.D.

DURING the past year, the number vaccinated in the town of Sholapore has amounted to 1,355, being 267 in excess of the average number vaccinated during the previous five years, but 233 less than 1857. This decrease, however, is only apparent, as the residents in the Sudder Bazar, who were vaccinated in the latter year by the Assistant Vaccinator, were included in my Return; whereas, in the past year, vaccinations in the Bazar have been performed by the Native Vaccinator, under the superintendence of the Staff Surgeon, and are consequently omitted in the accompanying Returns; they amount to 343. Of the total number vaccinated during 1858, 1,019 were males, and 336 females. This great disparity, which has been frequently observed in this locality, is difficult to account for. I am not aware that any prejudice exists in regard to the vaccination of females, although

such might be inferred from the above result. The percentage of success is slightly greater than in previous years, being 89·0. The lymph has been uniformly of good quality throughout the year. I have frequently tested it during the above-mentioned period, and, although in some instances the vesicles have appeared ill-formed in native children, the lymph taken from them has produced a perfect result when applied to the arms of Europeans. I am of opinion that the prejudices of the natives against vaccination are gradually giving way, and that they are more fully aware of the advantages attending the operation; and in cases where such a prejudice does still exist, I have usually observed that the individuals are those of the better class.

Small-pox has occurred in the town of Sholapore to a very slight degree, and medical aid was in no instance appplied for. Inoculation is not practised in this locality. Vaccination has lately been extended to the prisoners confined in the jail. Most of this class of persons, however, are found, on their admission to jail, to be protected either by a previous attack of Small-pox, or by vaccination—chiefly the former. Much success can scarcely be looked for amongst this class.

I have received every assistance from the Civil authorities in the propagation of vaccination; and I am satisfied with the zeal and attention to his duties which has been displayed by the Native Vaccinator attached to my Department, who has been exclusively employed in the duties of vaccination, and in no other way whatever.

REPORT FOR 1859.—By Assistant Surgeon J. C. Sylvester, M.D.

During the above period, the number vaccinated has amounted to 1,405, in 1,190 of which the result was successful, in 81 unsuccessful, and in 134 doubtful. A comparison of the total number vaccinated with the average of the previous five years exhibits an excess of 264. During the past year, the average of success has been 84·6, being somewhat less than that of the year 1858, which was 89·0. The lymph employed has been uniformly of good quality, and the supply has been kept up throughout the year. I have made a practice of constantly inspecting the resulting vesicles, to ascertain that the lymph has not deteriorated.

The Assistant Vaccinator visits the town of Sholapore twice a week, for the purpose of carrying out vaccination amongst the inhabitants, and is assisted by two Police Peons, who are told off for that duty. They collect the subjects for vaccination, and are useful in bringing for inspection those children who have been operated upon during the previous week. The Assistant Vaccinator also attends every Friday at the Kotwal's chowree, in the Sudder Bazar, under the superintendence of the Staff Surgeon, for the purpose of extending the benefits of vaccination to the residents in camp. The majority of the inhabitants of Sholapore do not evince any feeling of dislike to the performance of vaccination, although some object to the lymph being taken from the arms of their children for the purpose of vaccinating others. I am not aware on what grounds this objection is based. The principal obstacle to the propagation of the Cow-pox is the natural apathy and indifference of the native character, rather than an aversion to vaccination itself. The great discrepancy between the number of males and females vaccinated in Sholapore, which has been pointed out in former years, still exists, the number of the former vaccinated during the past year exceeding the latter by more than threefold. The cause of this inequality I am unable to account for.

Small-pox has not prevailed in the town of Sholapore during the past year. One or two isolated cases have occurred in people who have brought the disease with them from other

places. Vaccination is regularly practised amongst those prisoners in the Jail who are ascertained, on their admission, to be protected neither by a previous attack of Small-pox, nor by vaccination. The percentage of success in these cases is much below that of the operations conducted outside the Jail, many of those operated on having probably had Small-pox previously, though exhibiting no marks of the disease. I have received every assistance from the Civil authorities in extending the benefits of vaccination to the inhabitants of Sholapore; and I am satisfied with the manner in which the Assistant Vaccinator has conducted his duties.

DHOOLIA.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	912	....	12	758	83·1
1859....	633	....	279	601	94·9

REPORT FOR 1858.—By Assistant Surgeon R. W. JAMES, M.D.

DURING the past year 912 persons were vaccinated, viz. 488 males, and 424 females; but of these the large number 154 is given as doubtful. This is owing to a great number of people either leaving the station, or declining to show their children after the operation has been performed; consequently, all such cases that are not seen after being vaccinated are returned as doubtful. There is a decrease of twelve in the number vaccinated this year from that of 1857; but this is mainly owing to the strong antipathy the Brahmins and high class natives have to the prophylactic, and to the fact that, during the last year, the station has been free from Small-pox.

REPORT FOR 1859.—By Assistant Surgeon R. W. JAMES, M.D.

DURING the year 633 persons have been vaccinated, viz. 308 males, and 325 females. Of these, 32 or nearly 20 per cent. are returned as doubtful, owing to the parents, either intentionally or unavoidably, removing the children after the operation, so as to prevent the lymph being taken. Amongst Brahmins there is not only a great dislike to *thin* children being vaccinated, but after the operation they object to the lymph being taken away, as an opinion is very prevalent amongst them that the children are weakened thereby. An epidemic of Small-pox broke out during the months of June and July in Dhoolia and the surrounding districts, more generally in the latter.

NASSICK.

One Vaccinator under the Sub-Assistant Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	1,100	....	332	826	75·1
1859....	1,110	10	....	870	78·3

No special Reports furnished.

AHMEDABAD.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	3,057	275	....	2,835	92·7
1859....	2,620	....	437	2,454	93·6

REPORT FOR 1858.—By Assistant Surgeon D. WYLLIE, M.D.

THE total number subjected to vaccination during the past year was 3,057, that for 1857 being 2,782. An increase of 275 is thus shown on the side of the year's operations; and this satisfactory result is, perhaps, chiefly due to the circumstance of a few cases of Small-pox appearing in the city—an occurrence that never fails to cause a demand for protection. The lymph employed was of good quality throughout, and the resulting vesicles have been well formed. A few cases of Small-pox appeared in the city during February and the early part of March. The total number attacked, however, did not, perhaps, exceed fifty. Inoculation does not appear to be practised—not a single instance having been reported for years past. The present system seems to work well under the Native Vaccinator—a man possessing great experience, and whose uniform attention, blended as it is with much kindness of manner, well qualifies him for the duty. The assistance of Police Peons is always available, but now less wanted than formerly, Hindoos of every caste and social condition voluntarily submitting their children, and opposition appears now to be confined to that comparatively small section of the Mussulman population constituting the Borah community.

REPORT FOR 1859.—By Assistant Surgeon D. WYLLIE, M.D.

THE total number vaccinated during the year was 2,620, being a decrease of 437 as compared with the operations of the previous year. The circumstance of *rubeola* having prevailed to some considerable extent during the early months of the season tended for a time to retard the progress of vaccination, and to this contingency the decrease noticed may be partly ascribed; while, on the other hand, the increased demand for vaccination, arising from the presence of Small-pox, noticed in 1858, has had no parallel during the past year. The lymph has continued good throughout the year, and the resulting vesicles have been well formed and distinctive. On no occasion has the virus undergone deterioration in respect of protective efficiency, such as has been remarked in the Deccan during the continuance of rain. There has likewise been abundance available at all times to meet the wants of neighbouring medical officers, and I have also been enabled to send supplies to Rajpootana. No case of Small-pox, either in the city or suburbs, has been reported within the year, nor has a single instance of inoculation been brought to notice. There is no active opposition or antagonism whatever to contend against. Some of the Mussulman population—such as the Borahs, for the most part—simply refuse vaccination; others receive it with evident distrust, and often only after much persuasion. The Hindoos are more accessible; they seldom resist solicitation, though many still feign excuses, especially on such occasions as season of the year or condition of health; but the large majority are absolutely indifferent and passive in the matter. It will thus be understood that, unless under the stimulus of fear, such as the presence of Small-pox ever awakens, few comparatively are voluntary applicants. That class at present is represented chiefly by Bunjaras and other jungle races, and some of the more enlightened of the Government employees. But time, however, in its progress is, no doubt, slowly and surely accomplishing the desired end, although the fact of wandering tribes being still foremost to appreciate the boon be barely suggestive of such a conclusion.

KAIRA.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	1,236	....	212	1,167	94·4
1859....	1,129	....	107	1,052	93·1

REPORT FOR 1858.—By Assistant Surgeon C. K. COLSTON.

THE total number vaccinated during the year was 1,236; that for the year 1857 was 1,448, showing a decrease of 212 on the whole. This decrease must not be attributed to any relaxation of the duties of the Vaccinator, or to any increased opposition having been offered to the practice by the people, but to a lack of subjects; in very few cases indeed has there been

any objection offered. This total includes Kaira and the villages in the immediate neighbourhood. In the villages around there is less opposition offered than in the town; but instances do occur in every village where a few of the inhabitants have an objection to their children being vaccinated. The vesicles and lymph have been for the most part healthy; the former occasionally have been small, and not well developed. In the town of Kaira four cases of Small-pox were reported; the cases were children, averaging from three to five years of age, and neither had been vaccinated; the cases were all fatal. One case in the Camp Bazar was reported to me, in which the subject—a young man—had been vaccinated as a child; this case was mild. Two fatal cases occurred in the villages, near of the ages of one and two years; one had been vaccinated successfully, the other had not been vaccinated.

In the course of the year the Police Corps at Kaira was recruiting largely, and a correspondence took place regarding the vaccination of Kolie recruits. The subject having been brought before Government, the opinion of the Commandant and of the Police Commissioner being, I believe, that, if any attempt were made to vaccinate Kolie recruits, they would desert, especially if done in a body. Since that the Guzerat Provincial Battalion has been raised, the Kolie recruits for which have been regularly and systematically vaccinated, sometimes singly at others in batches of ten or twelve, as the case may be, no objection has been offered in any single case, and no desertions have taken place in consequence. I therefore conclude that, had I been allowed to follow the same practice in the case of the Police, the alarming results anticipated would not have taken place.

REPORT FOR 1859.—By Assistant Surgeon C. K. Colston.

The total number vaccinated during the year was 1,129; that for the year 1858, 1,236—a slight diminution in the past year on the preceding; but the Assistant Vaccinator has been active in performing his duty. As must be expected, there is some degree of opposition of a passive nature to vaccination being fully carried out, owing to the prejudices, apathy, fears, &c. in the native mind. The number of males vaccinated exceeds, by more than double, that of females; and children are not brought forward as one would wish, so that it is necessary thoroughly to hunt them out. The percentage of successful cases on total vaccinated has been 93; but many of the vesicles produced during the last five months of the year were not very fully marked or developed, though they could not even be considered as doubtful; but their small size was owing, no doubt, to the season of the year, and Small-pox not being prevalent.

RAJCOTE.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	785	261	....	696	88·6
1859....	1,409	624	....	1,253	88·9

REPORT FOR 1858.—By Assistant Surgeon R. G. LORD, M.D.

VACCINATION in the town and cantonment of Rajcote and villages around has been assiduously carried on by the Station Vaccinator throughout the past year, unless when incapacitated by illness from the performance of this duty. 785 operations have been performed, being an increase of 261 over the preceding year. Of the above the average percentage of successful cases was 86·6, being somewhat higher than in the districts. The lymph, which I frequently examine, is good, and there is, in general, little difficulty in keeping it fit by transmission from child to child.

SURAT.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	1,543	....	351	1,292	83·7
1859....	1,298	....	245	1,084	83·5

REPORT FOR 1858.—By Surgeon R. DENT.

THE table shows, on comparison with that of last year, a decrease of 351, for which no particular cause can be assigned. No marked difference in the relations of sex and age has occurred this year to call for remark. A diminished success of 3 per cent. may possibly be ascribed to a further slight deterioration of the lymph—to renew it all attempts have failed,—but which, with the vesicles, preserve the characteristic appearance, the satisfactory quality of both being still preserved in European children. There was some Small-pox, as might be expected, in this populous city, but not in extent or virulence to constitute an epidemic. If inoculation has been practised, the fact has been carefully concealed. There is no known obstruction to vaccination beyond the prejudices of the people themselves.

REPORT FOR 1859.—By Assistant Surgeon W. C. BROWN, M.D.

FOR a decrease as compared with that of 1858 of 245, I am unable to assign any reason; but my experience is as yet very limited. During the past year there is a slight diminution in the percentage of successful cases as compared with the year 1858. This may possibly arise from the deterioration of the lymph, which has never been renewed. The attempt made during the year failed. Some cases of Small-pox occurred in the city last March, but all were of a mild character, the fatal cases being very few. I am given to understand that inoculation has never been practised at Surat; and no obstruction to vaccination exists beyond the prejudices of the people themselves.

BROACH.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	1,536	1	....	1,320	85·9
1859....	1,561	25	....	1,303	83·4

REPORT FOR 1858.—By Assistant Surgeon J. PINKERTON, M.D.

THE total number of persons vaccinated in Broach during the year 1858 is 1,536, which is only one more than the previous year; 597 were females, and 939 males; 649 were under one year old, and 887 above that age; 1,320 were successful, which is 92·6 per cent., after deducting from the total 111 doubtful cases; that is, those who were never seen after being operated on. Including these 111 doubtful cases, the known success is 85·9 per cent. The unsuccessful amounted to 105, or 7·3 per cent. of the total, being 34·2 per cent. more than last year. The cause of so many unsuccessful cases occurring last year is supposed to have been the great increase of ague among children. Inoculation is not practised here. A few cases of Small-pox occurred, but none were brought for treatment. Judging from the prisoners here, Small-pox must have been very common in Broach zillah formerly, for nearly every man and woman in the jail is marked with Small-pox. The lymph has remained good, and the vesicles have also been good, although small.

REPORT FOR 1859.—By Assistant Surgeon J. GLEN.

THE present year shows a return somewhat greater than its predecessor, the total vaccinated being 1,561, or an increase of 25 over last year. Of the total number, 925 were males, and 636 were females; 807 of which were children under one year, and 754 children above that age; 1,303 were successful, 134 unsuccessful, and 124 doubtful. Of the various castes, the Hindoo would appear to appreciate more fully the beneficial results of vaccination, and is, perhaps, more manageable in our intercourse with him, and more acquiescent to our wishes than any of the other castes. The Mussulman, although not unwilling to submit his offspring to the vaccination virus, is too often afterwards apathetic as to the result, and too negligent and indifferent to present the child during the process of maturation. The result is, that, if not sought out or encouraged by some means or other to return, he absents himself altogether, and the matter is consequently lost. In respect to the Parsees and Brahminical orders, an ineradicable prejudice against the practice generally obtains. This contrasts oddly with their

otherwise intelligent character, and might be subjective of a doubt whether claims to psychological superiority have been so unquestionably established. At any rate it discloses an unworthy and baneful prejudice, demanding the severest reprobation, but which, in others less favoured, might call forth either our pity and perhaps respect. Inoculation has not been practised in this locality for several years, its professors for a long period previous to this having received little or no patronage or encouragement. The lymph continues very good; and the zeal, assiduity, and general conduct of the Assistant Vaccinator deserve commendation.

BELGAUM.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	643	116	....	599	93·1
1859....	478	....	165	435	91·0

REPORT FOR 1858.—By Surgeon T. Waller.

During the year 1858, 643 persons have been vaccinated, being an increase of 116 as compared with the number vaccinated during the previous year. Of these, 263 were children under one year, and 380 above that age. The successful vaccinations have been 599, or 93·1 per cent. on the total number vaccinated. A good deal of apathy is shown by the people; and, although every endeavour has been made to collect subjects for vaccination at certain periods and at fixed stations, very great difficulty is experienced in carrying it out; and great trouble, and indeed hardship, is entailed by the Assistant Vaccinator having to go from house to house in search of subjects. Occasional aid is afforded by the bazar Peons; but having other duties to perform, they are not always at disposal; and the want of a Peon permanently attached to the Vaccinator has never ceased to be felt as a great drawback and hindrance. The Small-pox epidemic of last year has protected a large number of children and adults, who survived its ravages. These periodic visitations will, I fear, never altogether cease in some civilised societies, where sanitary measures, though partially carried out, are frustrated, to a very great extent, by "the dirty habits of the people, want of ventilation, and apathy and indifference to vaccination."

REPORT FOR 1859.—By Surgeon T. Waller.

The total number vaccinated during the year is 478, showing a decrease of 165 as compared with the previous year. This has arisen from the fact of a separate Native Vaccinator having, for six months, been employed in the Camp Bazar, from which the Civil Vaccinator, who had

always previously vaccinated in it, was for the time excluded. The great Small-pox epidemic of 1857 secured a large number of children, and this also undoubtedly tended to reduce the number of subjects available for vaccination.

DHARWAR.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	1,025	....	618	891	86·9
1859....	1,222	197	....	1,090	89·1

REPORT FOR 1858.—By Surgeon W. NEILSON.

THE total number vaccinated for the past year is 1,025, showing a decrease on the previous one of 618. The decrease, I believe, is attributable in part to the entire absence of Small-pox during the past year, as, when the disease prevails, the people bring their children much more readily and willingly to have them vaccinated than when it does not. There is another cause which also helps to explain the decrease in the number vaccinated, viz. the Divisional Vaccinator now vaccinates in the villages in the neighbourhood of Dharwar, which, up to within the last year, were visited by the Station Vaccinator, but whose operations are now confined to the town of Dharwar and a few small villages around. To these two causes is to be attributed, I believe, the decrease in the number vaccinated for the past year.

REPORT FOR 1859.—By Surgeon W. NEILSON.

VACCINATION has progressed tolerably well during the past year. The number vaccinated is 1,222, showing an increase of 197 over the number vaccinated during the preceding year. Although the natives of this part of the country are not averse to vaccination, they show no anxiety to have their children vaccinated by bringing them to any particular place to have the operation performed, unless Small-pox is prevalent in the neighbourhood. It is therefore compulsory upon the Vaccinator, if he wishes to carry on his operation, to visit from house to house, especially of those who are somewhat well to do in the world.

KOLAPORE.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	2,954	....	243	2,639	89·3
1859....	2,036	....	918	1,864	91·5

REPORT FOR 1858.—By Assistant Surgeon E. H. LANGLEY, M.D.

A SLIGHT diminution in numbers has to be noted. This is more apparent than real, as the numbers obtained by a Station Vaccinator are necessarily influenced by his working in the Cantonment bazars, &c. one day in each week. The numbers there obtained being reported by the medical officer of the camp are not repeated in my returns, or a fallacious result would be the consequence. The people appear to receive vaccination with increased willingness. The lymph has been good throughout the year.

REPORT FOR 1859.—By Assistant Surgeon C. G. WICHE, M.D.

DURING the past year, 2,036 vaccinations have been performed by the Station Vaccinator in the city and neighbouring villages in the Punalla and Kolapore districts, in addition to those operations performed by him in Camp and Cantonment bazars, which are not borne on any returns. A decrease is, I regret to say, the unfavourable result of the operations of the past year. This is, in a great measure, attributable to the fact that both Small-pox and cholera combined, in an unusual degree, to impede the progress of these prophylactic operations—either directly by deaths among the infant population, or indirectly by creating distrust in the minds of parents. It is gratifying, however, to note that, although the number of vaccinations has fallen considerably short of those of the preceding year, yet that the ratio of successful cases has been on the increase. 1,864 vaccinations were successful, and 171 doubtful or unsuccessful, giving a ratio of 91·5 per cent.; whereas in 1858 the ratio was 89·3 per cent. The children vaccinated above one year of age form about two-thirds of the whole, leaving only one-third for infant vaccinations—a result far from satisfactory, as there can be no doubt of the great importance of securing, at as early an age as practicable, the prophylactic influence of vaccination. Another subject demanding attention is the proportion of the lowest caste of Hindoos, who are brought within the protecting benefits of vaccination, comprising Mangs, Mhars, Dhores, &c. These are filthy in their habits, ill fed, and almost unclothed, presenting a fit pabulence for the ravages of disease. It should therefore be one of our chief cares that these out-castes be protected, and that they be not left, as they too often are, a focus for infection. Under the comprehensive term Hindoo are included, in the returns, all castes from the Brahmin to the Mang. It is therefore not therein apparent to what extent the different castes are protected. On reference to the registers it would appear that 199 children of the lowest—viz. Chambars, Mangs, Mhars, and Dhores—have been vaccinated,

being a proportion of about 10 per cent. This figure seems scarcely to present a fair average. In the absence, however, of population statistics, this can hardly be estimated. With reference to the sexes, the numbers would appear to be pretty equally and naturally balanced. No fault has been found with the condition of the lymph, which has been good, as evinced by the increase in the percentage of successful operations.

RUTNAGHERRY.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	587	....	384	517	88·0
1859....	961	374	....	873	90·8

REPORT FOR 1858.—By Assistant Surgeon E. N. C. DeCrespigny, M.D.

Notwithstanding every exertion, I regret to record this year a considerable falling off in the number vaccinated as compared with last year. I attribute the circumstance to the absence of Small-pox from the town of Rutnagherry; for I have observed that, whenever cases occur, or whenever Small-pox is known to be in the neighbourhood, the people come forward unsolicited, whilst at other times it is with difficulty we can obtain as many as will suffice to keep up a supply of lymph. The lymph has continued good and effective, notwithstanding that the vesicles were rarely seen as well developed as could be wished; the fact is, they are always interfered with before they can arrive at maturity, as no means are taken by the parents of the children to prevent the place being scratched; but so long as no purulent inflamation is set up, it is of little consequence. Of about eighty children inspected some weeks after operation at the village of Kalbadavie, I found the scars all perfectly regular and well-defined; and yet, as the children's ages averaged mostly four or five, the probabilities are, that almost every vesicle had been interfered with and ruptured by scratching before becoming perfectly developed. It were better to vaccinate at an early age, perhaps with a view to obviate this evil, and prevent mortality from Small-pox in infants; but it is so difficult at times to get any children at all to operate on, that we cannot be particular on that point; and as the lower classes begin to find out that vaccination is not compulsory, or rather, that they have nothing to fear from refusal, the probabilities are, that the returns will every year show a decrease instead of an increase. I can suggest no more effectual means of spreading vaccination than the promise of a small pecuniary reward in each case, and am convinced that the bestowal of a few pice upon every child of the poor villager who undergoes the operation would be followed by immense success, and nothing could be better calculated to remove every obstacle in the shape of prejudice; and perhaps, if the village Gooroo or Patel were assured of a commission or percentage, difficulties of every sort would vanish immediately, as otherwise they cannot be persuaded that our system of vaccination has any advantage over inoculation, or that there is any reason why indolence or indifference should not suggest procrastination.

REPORT FOR 1859.—By Assistant Surgeon E. N. C. DeCrespigny, M.D.

The total number vaccinated amounts to 961, being a considerable increase over the number recorded for last year; not so much so when compared with that for the year 1857. Out of total 961, only 150 were obtained in the town of Rutnagherry itself; the others were vaccinated at Halhkumbie, Newree, Bhoke, Meerjola, Ambeset, and Pangrie.

In the densely-populated fishing villages—surburbs of the town—opposition has been as usual experienced. At Meerkawara below the ford, where there are 400 huts, at Kurleh where there are 200, at Jewur, Tiergamu, and Bhatkawara, averaging about 75 more, the children literally swarm. These people are all Mussulmans and Bhundaries; yet others elsewhere of those castes have no objection, on religious grounds, in having their children vaccinated; it can therefore be solely from a spirit of opposition to the wishes of Government that they are actuated in refusing our services. The lymph has continued good in quality, although at one time, during the monsoon, there was some difficulty experienced in keeping up the supply. The same objection to having the vesicle interfered with by the Vaccinator, as was mentioned in last Report, has been reported, from time to time, as productive of great inconvenience.

KURRACHEE.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	769	118	....	653	84·0
1859....	1,014	245	....	933	92·0

REPORT FOR 1859.—By Assistant Surgeon J. Bean.

The returns of vaccination for the past year show a fair proportion of successful operations; the entire number vaccinated has been 1,014: of which 933 succeeded, while 29 failed, and 52 were doubtful. At the commencement of the year the Superintendent of Vaccination was at this station, and part of his Establishment was employed about the place, which left less to be done by the Vaccinator of the Civil Hospital; hence probably a smaller number is shown in the Return than otherwise might have been the case. Excepting a few Europeans, no children have been brought voluntarily by their parents for the purpose of vaccination; and were it left entirely to their discretion, little, perhaps, would be done, as they require often much persuasion to induce them to submit their children to the operation. It has been my endeavour, as far as possible, to verify the returns given in monthly by the Vaccinator, by desiring the children to be brought occasionally to the hospital for inspection; and to further this end, the Apothecary of the Commissioner's Establishment has been requested now and then to visit a few of the children whose names are in the list, with the view of ascer-

taining the correctness of the entry, and the state of the vesicle. The lymph has been carefully kept up and propagated throughout the year, and small supplies have, on several occasions, been forwarded to other stations when required. A few cases of Small-pox appeared in the town during the spring of the year, but none fell under my observation.

HYDRABAD.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	1,233	....	293	986	79·9
1859....	1,533	300	....	1,195	77·9

REPORT FOR 1858.—By Assistant Surgeon F. S. STEDMAN.

DURING the past year the total number vaccinated was 1,233, and in the previous year 1,526, showing a deficit of 293 in this year's operation on the preceding one, which is accounted for by the cases vaccinated in the Jail being returned separately; whereas, before they were accounted for in the civil annual report, the number vaccinated in the Jail was 217. Regarding the sex, age, and result of those vaccinated during the year, the number of males and females was nearly equal; and nearly one-third under one year of age were vaccinated in excess of those over one year. Of successful cases vaccinated 986, unsuccessful 99, and 148 doubtful, the percentage of success being 79·9. The quality of lymph and vesicles has been very good. No Small-pox was known to have prevailed during the year. No known obstruction to the spread of vaccination existed, although some of the people came forward readily, and others had to be persuaded to let their children be vaccinated.

REPORT FOR 1859.—By Assistant Surgeon F. S. STEDMAN.

DURING the past year (1859) the total number vaccinated was 1,533, showing an excess of 300 in this year's operations. Regarding the sex, age, and result of those vaccinated during the year, the number of males vaccinated exceeded the females by 115; and nearly one-third under one year of age were vaccinated in excess of those over one year. Of 1,533 vaccinated, 1,195 were successful, 161 unsuccessful, and 177 doubtful, the percentage of success being 77·9. The quality of lymph and vesicles has been very good. No Small-pox prevailed during the year. No inoculation or other obstruction to the spread of vaccination existed, and the people do not appear to have any objection to their children being vaccinated.

SHIKARPOOR.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	1,211	278	....	1,211	100·0
1859....	1,417	206	....	1,416	99·9

REPORT FOR 1858.—By Assistant Surgeon J. GILBERT.

ONE thousand three hundred and sixty-four children were born in Shikarpoor during the last year. Of these, 1,211 have been vaccinated, being 278 more than last year; 644 were males, and 567 females; 435 were Mussulmans, and 776 Hindoos; 1,062 under one year, and 147 above that age. The vaccination has been carried on under my personal inspection. The lymph has been exceedingly good, and every case has been successful. The Native Vaccinator has been employed for a long time at this station, and from his good conduct and high character is very much esteemed by the town's-people, and has great influence with them. No opposition has been shown to the extension of vaccination by the inhabitants.

REPORT FOR 1859.—By Assistant Surgeon A. A. MOTT.

ONE thousand four hundred and seventeen children have been vaccinated during the year, under the superintendence of the Civil Surgeon. Out of this number only one case has been declared doubtful. I examined nearly every case during the last four months of the year, and was struck with the prominent and healthy character which the vesicles almost invariably presented. The births registered by the Foujdar, without reference to sex, number 1,543 for the year ending 31st January 1859.

ADEN.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	1,136	235	....	1,042	91·7
1859....	853	....	283	639	74·9

REPORT FOR 1858.—By Assistant Surgeon J. F. STEINHAEUSER.

DURING the year 1858 every endeavour has been made by the Native Vaccinator under my supervision to extend the benefits of vaccination throughout the peninsula, and numeri-

cally speaking with better success than attended our efforts in the year 1857. The returns for the year 1858 show that 1,136 individuals have been vaccinated: of which number, 1,042 are entered as successful, and only 94 as unsuccessful operations, giving an increase of 141 successful cases on the returns of last year. Of the total number, 864 were males, and 272 females; but the amount of children operated on under one year of age is very small when compared with the total number, viz. only 32 of both sexes. The percentage of success, according to this number, would be 91·7.

In the returns all cases where a vesicle was produced after the operation are indiscriminately entered as successful. Native Vaccinators are naturally sanguine of success; and it is impossible for the Superintendent personally to inspect the result of every case. But I do not think that it could be confidently asserted that, out of the 1,136 cases vaccinated during the year, more than 470 are such as can be relied on as affording protection against or modifying Small-pox. If therefore 666 cases be considered as doubtful and unsuccessful, the percentage of success would be reduced to 41·3.

Small-pox prevailed to some extent in the town of Aden, and in the Somali village, near the Mala Bunder, from the month of January until September; in fact, since 1856 the epidemic had not left the station entirely. No case of the disease has, however, been known to exist in the peninsula since September 1858. The significant fact that 678 of the total number of individuals who submitted to vaccination were Somalies, taken into consideration with the very small number operated on under the age of one year, clearly points out the light in which this prophylactic measure is regarded by the inhabitants of Aden. The Somalies, who form about one-third of the population, undergo the operation because it is painless, does no harm, and produces, in a more pleasant mode than the actual cautery, indelible scars on the arms.

Every assistance is afforded by the Political authorities to further the spread of vaccination; but the Native Assistant has to seek out practice. Were he not to pursue this course, few indeed would be the cases brought to him for operation. Inoculation, as far as I can ascertain, is not practised at Aden, nor does any obstruction to the diffusion of this hygienic measure exist, beyond prejudice on the part of the minority of the people—the Hindoos; perversity on that of the Jews; and indifference on the part of the majority—the Mussulmans. For the furtherance of so desirable an end as the more effectual spread of vaccination, no better plan could be devised for Aden than to make this measure, as in all civilised countries, compulsory. The population among whom *varicla* prevails more or less every year is chiefly Mahomedan; and if not prejudiced against vaccination, must certainly be accused of ignorance of its benefits, or apathy and indifference to the advantages thus gratuitously offered.

MAHABLESHWUR.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	57	....	157	47	82·4
1859....	148	91	....	109	73·6

REPORT FOR 1858.—By Surgeon G. G. W. MAITLAND.

DURING the most favourable period of the year for carrying on vaccine operations—viz. from January to the middle of March,—the Bazar at this station was but thinly populated, and few subjects could be obtained. My Assistant Apothecary also, who has hitherto been in the habit of proceeding into the neighbouring villages for the purpose of vaccinating, was unable to do so last year, as his whole time and attention was taken up in attendance on the sick in the European hospital. Owing to the paucity of subjects procurable in the Bazar, the greatest difficulty was experienced in keeping up a good supply of vaccine lymph. In several instances it had to be obtained from Sattara or Poona, and in this way time and opportunity for carrying on operations were sometimes lost.

REPORT FOR 1859.—By Assistant Surgeon F. BROUGHTON.

THE cold season and its comparative leisure has enabled me to employ the Hospital Establishment in vaccination. The number vaccinated in 1858 was 57, and in this year 148. The lymph was obtained from Sattara, and proved effective.

ALIBAUGH.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	189	120	....	155	82·0
1859....	99	....	90	90	90·9

REPORT FOR 1858.—By Mr. Senior Apothecary HEARN.

AN increase of 120 persons vaccinated has taken place during the period under report, owing to vaccination having been performed in the neighbouring villages. The sexes vaccinated have been nearly equal, and the ages of the two classes are 13 in excess of those above one year. No adults have been operated upon. Of the 189 vaccinated during the year, 155 were successful, 33 unsuccessful, and 1 doubtful; the greater number of these have been re-vaccinated with success. The percentage of success is 82. The lymph and vesicles were good. Small-pox was prevalent in April and May.

REPORT FOR 1859.—By Mr. Senior Apothecary HEARN.

A DECREASE of 90 vaccinations has taken place during the present year, which is owing to two Assistant Vaccinators having been located in the vicinity of Alibaugh, consequently the people did not come in to me for vaccination. 57 male and 42 female children have been vaccinated, of which 41 were under one year, and 58 above one year. Of the 99 vaccinated during the year, 90 were successful, 8 unsuccessful, and 1 doubtful. The percentage of success is 90·9. The lymph and vesicles were very good. Small-pox, as usual, was prevalent in the months of April and May.

VINGORLA.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	213	11	....	148	69·4
1859....	89	....	124	48	53·9

REPORT FOR 1859.—By Mr. Apothecary GEORGE.

THE total number vaccinated for the year ending 31st December 1859 has been 89, while that of the year preceding was 213. The chief reason for this falling off is, that few children have since been born and fit to receive vaccination. The Hindoos, however, do not quite rely upon vaccination as a prophylactic, and are disposed rather to propitiate their Deity by sacrifices on the appearance of Small-pox, in order to avert the evil, than to trust to vaccination.

BUSHIRE.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1858....	177	....	18	172	97·1
1859....	225	48	....	206	91·5

REPORT FOR 1858.—By Assistant Surgeon W. E. WOOD.

FROM the 1st January to the 10th April no vaccination was performed, owing to the want of fresh vaccine matter. On the 11th April several ivory points, charged with good vaccine lymph, were received from Bagdad. From this date to the 29th June 141 children were successfully vaccinated, and 5 unsuccessfully, which latter number completely failed on account of the intense heat of the weather. From the latter date no vaccination practised up to the end of November. On the 1st December received a fresh supply of vaccine lymph from Bagdad; vaccinated thirty-one children successfully during that month. The total number of persons, including all castes, vaccinated during the past year was 177, being a decrease of 18 from the preceding year.

REPORT FOR 1859.—By Assistant Surgeon W. E. WOOD.

FROM the 1st January to the end of May 206 persons were vaccinated successfully, and 19 unsuccessfully; from the latter date to the end of December no vaccination was performed, as the lymph has invariably been found to cease to propagate in this place during the hot season. The total number of persons vaccinated during the past year was 225, being an increase of 48 over that of the preceding year.

APPENDIX.

TABLE

VACCINATION UNDER

Table of Divisional Vaccination, showing the Number and Names of the Divisions, and their compared with those of last Year; the Total Number arranged according to Sex, Caste, Operations performed by each Vac

Number.	Divisions.	Names of the Medical Officers, Superintendents of Vaccination.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.		
					1857.	Increase.	Decrease.
	1858						
1	Presidency	Sub-Assistant Surgeon Anunta Chundroba.	10	8,709	6,747	1,962	..
2	Concan.....	Assistant Surgeon T. B. Beatty	18	45,983	33,756	12,227	..
3	Northern Deccan	„ W. Davey	18	20,783	20,563	220	..
4	Southern Deccan	„ J. Mills	18	15,285	15,532	..	247
5	Western Guzerat	„ R. Thorp, M.D.....	15	20,804	28,857	..	8,053
6	Eastern Guzerat	„ C. Ross	17	20,503	25,563	..	5,060
7	Sind	„ T. E. P. Martin	15	47,130	40,777	6,353	..
8	Kattywar	„ R. G. Lord, M.D.	8	4,289	2,573	1,716	..
		Total..	119	183,486	174,368	9,118	..
	1859				1858		
1	Presidency	Sub-Assistant Surgeon Anunta Chundroba.	3	7,999	8,709	..	710
2	Concan.....	Assistant Surgeon T. B. Beatty	18	39,669	45,983	..	6,314
3	Northern Deccan	„ W. Davey	18	20,013	20,783	..	770
4	Southern Deccan	„ W. Peach, M.D.....	18	13,318	15,285	..	1,967
5	Western Guzerat	„ R. Thorp, M.D.	15	20,802	20,804	..	2
6	Eastern Guzerat	„ C. Ross	17	21,871	20,503	1,368	..
7	Sind	„ T. E. P. Martin	15	49,525	47,130	2,395	..
8	Kattywar	„ R. G. Lord, M.D.	8	4,744	4,289	455	..
		Total..	112	177,941	183,486	..	5,543

No. 1 (For 1858 and 1859.)

SUPERINTENDENTS.

Superintendents; the Number of Vaccinators employed; the Total Vaccinations performed, Age, and Result; the Ratio of Successful to Total Vaccinated; and the Average Number of cinator, for the Years 1858 and 1859.

Total Number Vaccinated, arranged according to—													Ratio per Cent. of Successful to Number Vaccinated.	Average Number of Persons Vaccinated by each Vaccinator.
Sex.		Caste.					Age.		Result.					
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful.	Doubtful.			
5,051	3,658	5,543	1,255	963	404	544	4,458	4,251	6,996	630	1,083		80·3	871
23,548	22,435	42,849	2,676	164	2	292	7,707	38,276	43,856	935	1,192		95·3	2,554
10,704	10,079	18,856	635	6	..	1,286	2,663	18,120	19,998	400	385		96·2	1,154
8,009	7,276	13,654	1,265	59	..	307	3,673	11,612	14,318	614	358		93·6	849
11,108	9,696	17,732	1,540	..	6	1,526	13,167	7,637	18,481	1,204	1,119		88·8	1,387
11,826	8,677	17,643	2,313	..	43	504	6,308	14,195	17,920	1,620	963		87·4	1,206
28,656	18,474	7,212	38,617	15	23	1,263	14,616	32,514	45,155	905	1,070		95·8	3,142
2,303	1,986	3,767	437	..	..	85	1,897	2,392	3,674	383	232		85·6	536
101,205	82,281	127,256	48,738	1,207	478	5,807	54,489	128,997	170,393	6,691	6,402		92·8	1,541
4,447	3,552	5,895	1,147	767	168	22	3,205	4,794	6,532	1,028	439		81·6	2,666
20,338	19,331	37,872	1,450	311	1	35	6,550	33,119	36,971	1,283	1,415		93·1	2,204
10,509	9,504	17,738	680	9	..	1,586	1,837	18,176	19,018	559	436		95·0	1,112
7,212	6,106	11,992	956	26	..	344	4,271	9,047	12,278	561	479		92·1	740
10,961	9,841	18,269	1,028	..	3	1,502	14,194	6,608	18,693	1,098	1,011		89·8	1,387
12,347	9,524	18,642	2,617	..	2	610	7,446	14,425	18,894	1,836	1,141		86·3	1,286
28,891	20,634	6,515	40,766	22	..	2,282	12,022	37,503	48,843	309	373		98·6	3,302
2,501	2,243	4,219	428	..	..	97	2,512	2,232	4,287	303	154		90·3	593
97,206	80,735	121,142	49,012	1,135	174	6,478	52,037	125,904	165,516	6,977	5,448		93·0	1,588

TABLE

VACCINATION UNDER

Table of Vaccination under Civil Surgeons and others, arranged according

Number.	Superintending Surgeons Divisions.	Civil Stations.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.			Sex.	
					1857.	Increase.	Decrease.	Males.	Females.
1	Presidency	Tanna	1	336	254	82	..	198	138
		Alibaugh	..	189	69	120	..	100	89
		Bandora Dispensary	..	75	76	..	1	48	27
		Coorla	..	20	....	..	..	10	10
		Total..	1	620	399	221	..	356	264
2	Poona	Poona	1	1,236	1,692	..	456	734	502
		Ahmednuggur	1	1,349	1,112	237	..	751	598
		Sattara	1	2,116	1,233	883	..	1,162	954
		Sholapore	1	1,355	1,588	..	233	1,019	336
		Dhoolia	1	912	924	..	12	488	424
		Nassick	1	1,100	1,432	..	332	597	503
		Mahableshwur	..	57	214	..	157	28	29
		Total..	6	8,125	8,195	..	70	4,779	3,346
3	Northern	Ahmedabad	1	3,057	2,782	275	..	1,658	1,399
		Kaira	1	1,236	1,448	..	212	773	463
		Rajcote	1	785	524	261	..	430	355
		Surat	1	1,543	1,894	..	351	815	728
		Broach	1	1,536	1,535	1	..	939	597
		Bhooj Dispensary	..	....	38	..	..	..	....
		Total..	5	8,157	8,221	..	64	4,615	3,542
4	Southern	Belgaum	1	643	527	116	..	393	250
		Dharwar	1	1,025	1,643	..	618	569	456
		Kolapore	1	2,954	3,197	..	243	1,511	1,443
		Rutnagherry	1	587	971	..	384	290	297
		Vingorla	..	213	202	11	..	132	81
		Total..	4	5,422	6,540	..	1,118	2,895	2,527
5	Sind	Kurrachee	1	769	651	118	..	429	340
		Hydrabad	1	1,233	1,526	..	293	663	570
		Shikarpoor	1	1,211	933	278	..	644	567
		Kurrachee Dispensary	..	....	17	..	17	..	....
		Ditto Jail	..	95	74	21	..	93	2
		Hydrabad do. and Civil	..	217	173	44	..	216	1
		Shikarpoor do.	..	34	....	34	..	32	2
		Jerruck	..	51	261	..	210	29	22
		Meerpoor	..	33	31	2	..	18	15
		Rorce	..	162	269	..	107	76	86
		Mahomed Khan's Tanda	..	47	10	37	..	31	16
		Halla	..	....	14	..	14	..	....
		Taroosha	..	714	32	672	..	461	253
		Larkhana	..	59	....	59	..	39	20
		Total..	8	4,625	4,001	624	..	2,731	1,894
6	Aden	Aden	1	1,136	901	235	..	864	272
7	Persian Gulf	Bushire	..	177	195	..	18	91	86
		Grand Total..	20	28,262	28,452	..	190	16,331	11,931

No. 2.

Civil Surgeons and others.

to Divisions, and showing the Details, as in Table No. 1, for the Year 1858.

Total Number Vaccinated, arranged according to—											
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of persons Vaccinated by each Vaccinator.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful.	Doubtful.		
241	28	56	4	7	80	256	319	17	....	94·9	336
12	150	4	..	23	88	101	155	33	1	82·0	....
20	14	38	3	....	24	51	66	5	4	88·0	....
1	4	15	..	....	2	18	14	4	2	70·0	....
274	196	113	7	30	194	426	554	59	7	89·3	336
1,012	162	54	5	3	342	894	970	134	132	78·4	1,236
1,147	176	16	8	2	140	1,209	1,249	22	78	92·5	1,349
1,914	142	14	..	46	1,016	1,100	1,818	80	218	85·9	2,116
1,145	204	..	..	6	243	1,112	1,207	....	148	89·0	1,355
668	121	6	..	117	656	256	758	....	154	83·1	912
981	42	2	..	75	689	411	826	40	234	75·1	1,100
29	22	3	3	....	16	41	47	10	....	82·4	....
6,896	869	95	16	249	3,102	5,023	6,875	286	964	84·6	1,345
2,347	687	10	10	3	1,450	1,607	2,835	134	88	92·7	3,057
554	230	6	..	446	325	911	1,167	60	9	94·4	1,236
618	132	7	4	24	376	409	696	67	22	88·6	785
1,252	173	3	28	87	685	858	1,292	205	46	83·7	1,543
1,086	401	2	47	....	649	887	1,320	105	111	85·9	1,536
....	....	..	..	....	....	....	....	....	....	....	....
5,857	1,623	28	89	560	3,485	4,672	7,310	571	276	89·6	1,631
521	99	23	..	....	263	380	599	44	....	93·1	643
837	158	20	4	6	342	683	891	106	28	86·9	1,025
2,890	64	..	..	....	813	2,141	2,639	166	149	89·3	2,954
555	25	7	..	....	75	512	517	36	34	88·0	587
153	41	19	..	....	71	142	148	29	36	69·4	....
4,956	387	69	4	6	1,564	3,858	4,794	381	247	88·4	1,302
318	303	42	8	99	589	180	653	60	56	84·0	769
537	695	..	1	....	716	517	986	99	148	79·9	1,233
434	776	..	..	....	1,062	149	1,211	....	....	100·0	1,211
....	....	..	..	....	....	....	....	....	....	....	....
28	67	..	..	....	....	95	67	28	....	70·5	....
22	195	..	..	....	....	217	156	55	6	71·8	....
5	29	..	..	....	1	33	26	....	8	76·4	....
14	37	..	..	....	22	29	51	....	....	100·0	....
7	26	..	..	....	14	19	22	7	4	66·6	....
75	79	..	..	8	133	29	162	....	....	100·0	....
12	35	..	..	....	19	28	47	....	....	100·0	....
....	....	..	..	....	....	....	....	....	....	....	....
180	534	..	..	....	253	461	688	26	....	96·3	....
19	40	..	..	....	....	59	41	12	6	69·4	....
1,651	2,816	42	9	107	2,809	1,816	4,110	287	228	88·8	1,071
111	104	89	..	832	32	1,104	1,042	94	....	91·7	1,136
....	167	1	..	9	48	129	172	5	....	97·1	....
19,745	6,162	437	125	1,793	11,234	17,028	24,857	1,683	1,722	87·9	1,306

TABLE

VACCINATION UNDER

Table of Vaccination under Civil Surgeons and others, arranged according

Number.	Superintending Surgeons Divisions.	Civil Stations.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.			Sex.	
					1858.	Increase.	Decrease.	Males.	Females.
1	Presidency ..	Tanna	1	235	336	..	101	165	70
		Alibaugh ..	..	99	189	..	90	57	42
		Bandora Dispensary	..	49	75	..	26	27	22
		Coorla do.	..	20	20	..	..	12	8
		Total..	1	403	620	..	217	261	142
2	Poona	Poona	1	1,460	1,236	224	..	925	535
		Ahmednuggur	1	986	1,349	..	363	581	405
		Dhoolia	1	633	912	..	279	308	325
		Sholapore	1	1,405	1,355	50	..	1,017	388
		Sattara	1	2,016	2,116	..	100	1,112	904
		Nassick	1	1,110	1,100	10	..	571	539
		Mahableshwur	..	148	57	91	..	86	62
		Total..	6	7,758	8,125	..	367	4,600	3,158
3	Northern	Ahmedabad	1	2,620	3,057	..	437	1,392	1,228
		Kaira	1	1,129	1,236	..	107	783	346
		Rajkote	1	1,409	785	624	..	759	650
		Surat	1	1,298	1,543	..	245	700	598
		Broach	1	1,561	1,536	25	..	925	636
		Total..	5	8,017	8,157	..	140	4,559	3,458
4	Southern	Belgaum	1	478	643	..	165	304	174
		Dharwar	1	1,222	1,025	197	..	672	550
		Kolapore	1	2,036	2,954	..	918	1,038	998
		Rutnagherry	1	961	587	374	..	475	486
		Vingorla	..	89	213	..	124	48	41
		Total..	4	4,786	5,422	..	636	2,537	2,249
5	Sind	Kurrachee	1	1,014	769	245	..	567	447
		Hydrabad	1	1,533	1,233	300	..	824	709
		Shikarpoor	1	1,417	1,211	206	..	770	647
		Kurrachee Jail	..	10	95	..	85	10	...
		Hydrabad do.	..	256	217	39	..	249	7
		Shikarpoor do.	..	357	34	323	..	340	17
		Jerruck Civil Jail	..	21	51	..	30	15	6
		Roree do.	..	308	162	146	..	163	145
		Mahomed Khan's Tanda ..	..	37	47	..	10	24	13
		Halla Police	..	32	....	..	..	15	17
		Taroosha Dispensary	..	182	714	..	532	109	73
		Larkhana do.	..	323	59	264	..	194	129
		Bolakan's Tanna Police ..	..	19	....	..	..	9	10
		Meerpoor	..	....	33	..	33	....	....
		Total..	3	5,509	4,625	884	..	3,289	2,220
6	Aden	Aden	1	853	1,136	..	283	630	223
7	Persian Gulf ..	Bushire	..	225	177	48	..	119	106
		Grand Total..	20	27,551	28,262	..	711	15,995	11,556

No. 2 (For 1859.)

Civil Surgeons and others.

to Divisions, and showing the Details, as in Table No. 1, for the Year 1859.

Total Number Vaccinated, arranged according to—											
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Average Number of persons Vaccinated by each Vaccinator.
Hindoos.	Musulmans	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful.	Doubtful.		
160	33	27	5	10	58	177	204	22	9	86·8	235
64	....	10	..	25	41	58	90	8	1	90·9	....
11	9	27	2	....	10	39	40	3	6	81·6	....
5	1	14	..	....	3	17	10	5	5	50·0	....
240	43	78	7	35	112	291	344	38	21	85·3	235
1,207	222	31	..	....	432	1,028	1,228	86	146	84·1	1,460
785	185	16	..	....	131	855	855	66	65	86·7	986
469	58	2	1	103	472	161	601	....	32	94·9	633
1,117	288	..	..	....	416	989	1,190	81	134	84·6	1,405
1,865	132	16	2	1	944	1,072	1,725	94	197	85·5	2,016
967	22	18	..	103	694	416	870	35	205	78·3	1,110
98	38	6	6	....	34	114	109	27	12	73·6	....
6,508	945	89	9	207	3,123	4,635	6,578	389	791	84·7	1,268
2,119	489	4	6	2	1,705	915	2,454	89	77	93·6	2,620
516	199	6	..	408	345	784	1,052	60	17	93·1	1,129
1,225	154	1	..	29	698	711	1,253	100	56	88·9	1,409
992	190	9	29	78	587	711	1,084	161	53	83·5	1,298
1,103	417	1	40	....	807	754	1,303	134	124	83·4	1,561
5,955	1,449	21	75	517	4,142	3,875	7,146	544	327	89·1	1,603
353	114	11	..	....	243	235	435	43	....	91·0	478
1,004	201	3	3	11	292	930	1,090	103	29	89·1	1,222
1,983	53	..	..	....	549	1,487	1,864	90	82	91·5	2,036
934	13	14	..	....	101	860	873	53	35	90·8	961
71	10	8	..	....	24	65	48	26	15	53·9	....
4,345	391	36	3	11	1,209	3,577	4,310	315	161	90·0	1,174
268	488	31	31	196	494	520	933	29	52	92·0	1,014
576	951	1	5	....	890	643	1,195	161	177	77·9	1,533
610	803	2	2	....	1,385	32	1,416	1	....	99·9	1,417
3	7	..	..	....	....	10	6	4	....	60·0	....
34	222	..	..	....	....	256	218	29	9	85·1	....
32	325	..	..	....	6	351	237	....	120	66·3	....
9	12	..	..	....	4	17	19	2	....	90·4	....
117	147	..	..	44	168	140	308	....	....	100·0	....
11	26	..	..	....	8	29	37	....	....	100·0	....
2	30	..	..	....	10	22	32	....	....	100·0	....
68	114	..	..	....	98	84	174	8	....	95·6	....
209	108	..	..	6	144	179	252	49	22	77·1	....
13	6	..	..	....	12	7	15	....	4	78·9	....
....	....	..	..	....	....	....	....	....	....	....	....
1,952	3,239	34	38	246	3,219	2,290	4,842	283	384	87·8	1,321
69	160	4	27	593	41	812	639	167	47	74·9	853
....	211	4	..	10	102	123	206	19	....	91·5	....
19,069	6,438	266	159	1,619	11,948	15,603	24,065	1,755	1,731	87·3	1,226

TABLE

VACCINATION UNDER

Table of Vaccination through the Agency of the Native Chiefs, arranged according for the Years

Number.	Divisions.	Stations.	Medical Officers.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.		
						1857.	Increase.	Decrease.
	1858							
1	Southern Deccan ..	Kolapore, &c.....	Asst. Surg. J. Mills	17	10,275	8,723	1,552	....
2	Western Guzerat ..	Mahee Kanta....	„ R. Thorp, M.D.	10	13,693	15,289	..	1,596
3	Eastern Guzerat....	Rewa Kanta	„ C. Ross.....	11	5,846	7,756	..	1,910
4	Northern Deccan ..	Peint (Nassick)..	Sub-Asst. Surg. R. Spencer.	1	330	305	25	....
5	Southern Deccan ..	Sawunt Warree ..	Asst. Surg. J. Kearney	1	5,426	6,102	..	676
6	Kattywar Circle....	Rajcote, &c.	„ R. G. Lord, M.D.	8	9,572	5,838	3,734	....
7	Northern Division..	Cutch (Bhooj) ..	Mr. Sudashew Hemraj, Graduate G.M.C.	4	677	1,166	..	489
			Total..	52	45,819	45,179	640	....
	1859					1858		
1	Southern Deccan ..	Kolapore, &c.....	Asst. Surg. W. Peach	17	9,900	10,275	..	375
2	Western Guzerat ..	Mahee Kanta....	„ R. Thorp, M.D.	10	14,511	13,693	818	....
3	Eastern Guzerat....	Rewa Kanta	„ C. Ross	13	4,774	5,846	..	1,072
4	Northern Deccan ..	Peint (Nassick)..	Sub-Asst. Surg. R. Spencer.	1	428	330	98	....
5	Southern Deccan ..	Sawunt Waree ..	„ „ Burjorjee Ardaseer.	1	4,135	5,426	..	1,291
6	Kattywar Circle....	Rajcote	Asst.Surgeon J. Nicolson ..	19	13,359	9,572	3,787	....
7	Northern Division..	Bhooj	Mr. Sudashew Hemraj, Graduate G.M.C.	4	161	677	..	516
			Total..	65	47,268	45,819	1,449	....

No. 3.

Native Chiefs' Agency.

to the Divisions of Vaccination, and showing Details, as in Tables Nos. 1 *and* 2, 1858 *and* 1859.

Total Number Vaccinated, arranged according to													
Sex.		Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of persons Vaccinated by each Vaccinator.
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful.	Doubtful.		
5,386	4,889	9,395	552	13	..	315	2,850	7,425	9,662	389	224	94·0	604
7,073	6,620	11,732	931	..	..	1,030	7,090	6,603	11,544	903	1,246	84·3	1,369
2,882	2,964	5,224	555	..	1	66	1,256	4,590	4,548	571	727	77·7	531
167	163	330	..	..	..	....	52	278	230	70	30	69·6	330
2,767	2,659	5,202	83	141	..	....	802	4,534	4,257	686	483	78·4	5,426
5,412	4,160	7,775	1,786	..	..	11	4,010	5,562	8,392	564	616	87·6	1,196
370	307	338	337	..	2	....	80	597	656	3	18	96·8	169
24,057	21,762	39,996	4,244	154	3	1,422	16,230	29,589	39,289	3,186	3,344	85·7	881
5,218	4,682	8,851	551	18	..	480	2,726	7,174	9,121	530	249	92·1	582
7,503	7,008	12,561	753	1	2	1,194	7,390	7,121	12,520	994	997	86·2	1,451
2,378	2,596	4,247	349	..	1	177	1,910	2,864	3,672	495	607	76·9	367
198	230	428	..	..	..	....	64	364	313	81	34	73·1	428
2,115	2,020	3,786	226	123	..	....	802	3,333	3,194	599	342	77·2	4,135
7,424	5,935	11,546	1,795	..	..	18	6,113	7,246	11,992	848	519	89·7	703
97	64	102	59	..	..	....	17	144	138	8	15	85·7	40
24,933	22,335	41,521	3,733	142	3	1,869	19,022	28,246	40,950	3,555	2,763	86·6	727

TABLE

General Abstract of Vaccination

Designation of Tables.	Total Number Vaccinated.	Compared with last Year.			Sex.	
		1857.	Increase.	Decrease.	Males.	Females.
1858						
No. 1, Vaccination under Superintendents.....	183,486	174,368	9,118	....	101,205	82,281
No. 2, Ditto under Civil Surgeons, &c.....	28,262	28,452	....	190	16,331	11,931
No. 3, Ditto by the Native Chiefs' Agency	45,819	45,179	640	....	24,057	21,762
Total..	257,567	247,999	9,568	....	141,593	115,974
1859		1858				
No. 1, Vaccination under Superintendents.....	177,941	183,486	....	5,543	97,206	80,735
No. 2, Ditto under Civil Surgeons, &c.	27,551	28,262	....	711	15,995	11,556
No. 3, Ditto by the Native Chiefs' Agency	47,268	45,819	1,449	....	24,933	22,335
Total..	252,760	257,567	....	4,807	138,134	114,626

No. 4.

FOR THE YEARS 1858 AND 1859.

Total Number Vaccinated, arranged according to										
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful.	Doubtful.	
127,256	48,738	1,207	478	5,807	54,489	128,997	170,393	6,691	6,402	92·8
19,745	6,162	437	125	1,793	11,234	17,028	24,857	1,683	1,722	87·9
39,996	4,244	154	3	1,422	16,230	29,589	39,289	3,186	3,344	85·7
186,997	59,144	1,798	606	9,022	81,953	175,614	234,539	11,560	11,468	91·0
121,142	49,012	1,135	174	6,478	52,037	125,904	165,516	6,977	5,448	93·0
19,069	6,438	266	159	1,619	11,948	15,603	24,065	1,755	1,731	87·3
41,521	3,733	142	3	1,869	19,022	28,246	40,950	3,555	2,763	86·6
181,732	59,183	1,543	336	9,966	83,007	169,753	230,531	12,287	9,942	91·2

TABLE No. 5

SMALL-

Table showing the Admissions and Deaths from Small-pox amongst European and Native Troops, with the Percentage of Deaths to Strength

DIVISIONS.	EUROPEAN TROOPS.									NATIVE TROOPS.									PRISONERS IN						
	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to		Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to		Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.
								Strength.	Treated.								Strength.	Treated.							
1858																									
PRESIDENCY DIVISION	1,080	2	1	3	3	..	..	..	..	3,065	4	36	40	39	1	..	0·03	2·5	1,052	..	..	..	..	..	..
POONA „	4,030	..	16	16	5	1	10	0·02	6·2	10,174	..	33	33	12	3	18	0·02	9·1	1,674	..	2	2	1	1	..
NORTHERN „	1,722	..	4	4	2	2	..	0· 1	50·0	6,161	1	21	22	11	1	10	0·01	4·5	984	..	..	..	..	..	..
SOUTHERN „	2,435	..	14	14	13	1	..	0·04	7·1	5,812	..	29	29	28	1	..	0·01	3·4	1,226	..	1	1	1	..	..
SIND „	2,178	..	..	..	..	..	..	..	..	4,657	1	2	3	1	..	2	..	..	1,160	..	..	..	..	..	..
RAJPOOTANA FIELD FORCE..	2,997	1	69	70	46	3	21	0· 1	4·2	3,793	..	3	3	3	..	..	..	..	..	..	..	..	..	..	..
ADEN	333	..	..	..	..	..	..	..	..	1,283	..	1	1	1	..	..	..	..	161	..	2	2	2	..	..
GWALIOR FIELD FORCE	3,436	..	24	24	9	8	7	0· 2	29·1	2,331	..	26	26	12	1	13	0·04	3·8	..	..	..	..	..	..	..
MALWA	816	..	2	2	1	1	..	0· 1	50·0	2,816	..	4	4	4	..	..	..	..	..	..	..	..	..	..	..
REGIMENTS ABSENT FROM THE PRESIDENCY FROM JANUARY TO DECEMBER.	1,472	..	2	2	..	2	..	0· 1	100·0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTAL..	20,499	3	132	135	79	18	38	0· 2	13·3	40,062	6	155	161	111	7	43	0·02	4·3	6,267	..	5	5	4	1	..
1859																									
PRESIDENCY DIVISION	1,473	..	3	3	1	2	..	0· 1	66·6	2,956	..	2	2	1	1	..	0·03	50·0	1,031	..	3	3	2	1	..
POONA „	5,920	10	12	22	18	3	1	0·05	13·6	10,831	18	11	29	28	..	1	..	..	1,487	..	..	..	..	..	..
NORTHERN „	2,495	..	..	..	..	..	..	..	..	6,068	10	3	13	11	..	2	..	..	960	..	..	..	..	..	..
SOUTHERN „	2,220	..	..	..	..	..	..	..	..	4,840	..	1	1	1	..	..	..	..	1,055	..	..	..	..	..	..
SIND „	2,844	..	2	2	1	..	1	..	..	6,513	2	1	3	2	1	..	0·02	50·0	1,781	..	..	..	..	..	..
MALWA „	5 034	21	11	32	31	..	1	..	..	6,246	..	7	7	7	..	..	..	..	..	..	..	..	..	..	..
GWALIOR „	1,456	7	2	9	7	..	2	..	..	2,235	13	9	22	21	..	1	..	..	..	..	..	..	..	..	..
ADEN	303	..	1	1	1	..	..	..	..	1,129	..	..	..	..	..	..	..	..	159	..	..	..	..	..	..
TOTAL..	21,745	38	31	69	59	5	5	0·02	7·2	40,818	43	34	77	71	2	4	0·004	2·6	6,473	..	3	3	2	1	..

(for 1858 and 1859.)

Pox.

Prisoners in Jails, Civil Hospitals, and Dispensaries, in each Division of the Bombay Presidency and to Treated, for the years 1858 *and* 1859.

Jails.		Civil Hospitals.									Dispensaries.									European General Hospital, Bombay.								
Percentage of Deaths to									Percentage of Deaths to									Percentage of Deaths to								Percentage of Deaths to	
Strength.	Treated.	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Strength.	Treated.	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Strength.	Treated.	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Strength.	Treated.
..	..	Unknown and variable.	1	60	61	25	33	3	..	54·1	Unknown and variable.	..	6	6	6	..	..	..	..	Unknown and variable.	..	48	48	37	11	..	..	22·9
0·05	50·0		..	6	6	5	1	..	..	16·6		..	1	1	1	..	..	..	..		..	..	..	..	..	..	..	....
..	..		..	5	5	5	..	..	..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	....
..	..		..	1	1	1	..	..	..	..		..	4	4	3	1	..	..	25·0		..	..	..	..	..	..	..	....
..	..		..	..	..	..	..	..	..	..		..	1	1	1	..	..	..	..		..	..	..	..	..	..	..	....
..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	....
..	..		5	58	63	44	19	..	..	30·1		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	....
..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	....
..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	....
..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	....
0·01	20·1		6	130	136	80	53	3	..	38·9		..	12	12	11	1	..	..	8·3		..	48	48	37	11	..	..	22·9
0·09	33·3	Unknown and variable.	3	57	60	39	21	..	..	35·0	Unknown and variable.	..	4	4	3	1	..	..	25·0	Unknown and variable.	..	18	18	16	2	..	..	11·1
..	..		..	7	7	6	1	..	..	14·3		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	....
..	..		..	4	4	2	2	..	..	50·0		..	7	7	6	1	..	..	14·3		..	..	..	..	..	..	..	....
..	..		..	3	3	3	..	..	..	..		..	1	1	1	..	..	..	..		..	..	..	..	..	..	..	....
..	..		..	..	..	..	..	..	..	..		..	2	2	2	..	..	..	..		..	..	..	..	..	..	..	....
..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	....
..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	....
..	..		..	41	41	26	13	2	..	31·7		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	....
0·01	33·3		3	112	115	76	37	2	..	32·1		..	14	14	12	2	..	..	14·3		..	18	18	16	2	..	..	11·1

TABLE OF AGES.

Vaccination in 1858, *arranged according to Ages, whether performed under or above One Year of Age.*

	Establishments, &c.	Age.		Difference.		Total Vaccinated.
		Under one Year.	Above one Year.	Under.	Above.	
I.	Superintendents	54,489	128,997	....	74,508	183,486
II.	Civil Surgeons and others	11,234	17,028	....	5,794	28,262
III.	Native Chiefs' Agency	16,230	29,589	....	13,359	45,819
	Total	81,953	175,614	....	93,661	257,567
I.—*Superintendents.*						
	Presidency Division	4,458	4,251	207	....	8,709
	Concan ,,	7,707	38,276	....	30,569	45,983
	Northern Deccan ,,	2,663	18,120	....	15,457	20,783
	Southern ,, ,,	3,673	11,612	....	7,939	15,285
	Western Guzerat ,,	13,167	7,637	5,530	....	20,804
	Eastern ,, ,,	6,308	14,195	....	7,887	20,503
	Sind ,,	14,616	32,514	....	17,898	47,130
	Kattywar ,,	1,897	2,392	....	495	4,289
II.—*Civil Surgeons and others.*						
	Tanna	80	256	....	176	336
	Alibaugh	88	101	....	13	189
	Bandora	24	51	....	27	75
	Coorla	2	18	....	16	20
	Poona	342	894	....	552	1,236
	Ahmednuggur	140	1,209	....	1,069	1,349
	Sattara	1,016	1,100	....	84	2,116
	Sholapore	243	1,112	....	869	1,355
	Dhoolia	656	256	400	....	912
	Nassick	689	411	278	....	1,000
	Mahableshwur	16	41	....	25	57
	Ahmedabad	1,450	1,607	....	157	3,057
	Kaira	325	911	....	586	1,236
	Rajcote	376	409	....	33	785
	Surat	685	858	....	173	1,543
	Broach	649	887	....	238	1,536
	Belgaum	263	380	....	117	643
	Dharwar	342	683	....	341	1,025
	Kolapore	813	2,141	....	1,328	2,954
	Rutnagherry	75	512	....	437	587
	Vingorla	71	142	....	71	213
	Kurrachee	589	180	409	....	769
	Hydrabad	716	517	199	....	1,233
	Shikarpoor	1,062	149	913	....	1,211
	Kurrachee Jail	....	95	....	95	95
	Hydrabad ,,	....	217	....	217	217
	Shikarpoor ,,	1	33	....	32	34
	Jerruck	22	29	....	7	51
	Meerpoor	14	19	....	5	33
	Roree	133	29	104	....	162
	Mahomed Khan's Tanda	19	28	....	9	47
	Halla	....	....	....	....	....
	Taroosha	253	461	....	208	714
	Larkhana	....	59	....	59	59
	Aden	32	1,104	....	1,072	1,136
	Bushire	48	129	....	81	177
III.—*Native Chiefs' Agency.*						
	Kolapore, &c.	2,850	7,425	....	4,575	10,275
	Mahee Kanta	7,090	6,603	487	....	13,693
	Rewa Kanta	1,256	4,590	....	3,334	5,846
	Peint (Nassick)	52	278	....	226	330
	Sawunt Waree	892	4,534	....	3,642	5,426
	Rajcote, &c.	4,010	5,562	....	1,552	9,572
	Bhooj	80	597	....	517	677

TABLE OF AGES.

Vaccination in 1859, *arranged according to Ages, whether performed under or above One Year of Age.*

	Establishments, &c.	Age.		Difference.		Total Vaccinated.
		Under one Year.	Above one Year.	Under.	Above.	
I.	Superintendents	52,037	125,904	....	73,867	177,941
II.	Civil Surgeons and others	11,948	15,603	....	3,655	27,551
III.	Native Chiefs' Agency	19,022	28,246	....	9,224	47,268
	Total..	83,007	169,753	....	86,746	252,760
I.—*Superintendents.*						
	Presidency Division	3,205	4,794	....	1,589	7,999
	Concan „	6,550	33,119	....	26,569	39,669
	Northern Deccan „	1,837	18,176	....	16,339	20,013
	Southern „ „	4,271	9,047	....	4,776	13,318
	Western Guzerat „	14,194	6,608	7,586	....	20,802
	Eastern „ „	7,446	14,425	....	6,979	21,871
	Sind „	12,022	37,503	....	25,481	49,525
	Kattywar „	2,512	2,232	280	....	4,744
II.—*Civil Surgeons and others.*						
	Tanna	58	177	....	119	235
	Alibaugh	41	58	....	17	99
	Bandora	10	39	....	29	49
	Coorla	3	17	....	14	20
	Poona	432	1,028	....	596	1,460
	Ahmednuggur	131	855	....	724	986
	Dhoolia	472	161	311	....	633
	Sholapore	416	989	....	573	1,405
	Sattara	944	1,072	....	128	2,016
	Nassick	694	416	278	....	1,110
	Mahableshwur	34	114	....	80	148
	Ahmedabad	1,705	915	790	....	2,620
	Kaira	345	784	....	439	1,129
	Rajcote	698	711	....	13	1,409
	Surat	587	711	....	124	1,298
	Broach	807	754	53	....	1,561
	Belgaum	243	235	8	....	478
	Dharwar	292	930	....	642	1,222
	Kolapore	549	1,487	....	938	2,036
	Rutnagherry	101	860	....	759	961
	Vingorla	24	65	....	41	89
	Kurrachee	494	520	....	26	1,014
	Hydrabad	890	643	247	....	1,533
	Shikarpoor	1,385	32	1,353	....	1,417
	Kurrachee Jail	....	10	....	10	10
	Hydrabad „	....	256	....	256	256
	Shikarpoor „	6	351	....	345	357
	Jerruck	4	17	....	13	21
	Roree	168	140	28	....	308
	Mahomed Khan's Tanda	8	29	....	21	37
	Halla	10	22	....	12	32
	Taroosha Dispensary	98	84	14	....	182
	Larkhana	144	179	....	35	323
	Bolakhan's Tanna	12	7	5	....	19
	Aden	41	812	....	771	853
	Bushire	102	123	....	21	225
III.—*Native Chiefs' Agency.*						
	Kolapore, &c.	2,726	7,174	....	4,448	9,900
	Mahee Kanta	7,390	7,121	269	....	14,511
	Rewa Kanta	1,910	2,864	....	954	4,774
	Peint (Nassick)	64	364	....	300	428
	Sawunt Waree	802	3,333	....	2,531	4,135
	Rajcote	6,113	7,246	....	1,133	13,359
	Bhooj	17	144		127	161

GENERAL DEPARTMENT.

Government Resolution No. 521, 23rd April 1861.

The Governor in Council has perused, with much interest, the Report of the Principal Inspector-General of the Medical Department on the state of Vaccination in this Presidency during the years 1858 and 1859. It is on the whole satisfactory.

2. The delay in issuing the Report, although sufficiently accounted for, is to be regretted, as much of the interest which attaches to such periodical statements is lost if they are not quickly forwarded. The Principal Inspector-General should therefore be requested to arrange that the Annual Report for 1860 be prepared and submitted at as early a date as possible. If the full details which are considered necessary to be published cannot be prepared before the 1st May of each year, a brief sketch of the working of the Department should, in the first instance, be sent in to Government.

3. According to the returns now submitted, the total number of vaccinations performed throughout the Bombay Presidency average about (2½) two and a-half lacs per annum, and that of these it is stated about one-tenth are failures. His Excellency the Governor in Council trusts that these figures may represent, with tolerable accuracy, the work performed; but from the remarks in the Principal Inspector-General's 9th, 10th, and 11th paragraphs, and in the Superintendents' Reports, and from his own observation, he cannot doubt that the Native Vaccinators are in the habit of exaggerating, to a certain extent, the number and success of their operations, and considers that such conduct should, when detected, be invariably followed with instant dismissal and prohibition from re-entering the public service in any capacity. The Governor in Council understands, from the 6th paragraph of Dr. Rooke's letter, that one of the objects of setting forth the number of *unsuccessful* cases and comparing them with the *successful*, is to judge of the ability of the operators and of the quality of the vaccine lymph employed. If the result is as shown in the returns, it seems satisfactory in both these respects.

4. In speaking of the quality of the vaccine lymph, the several Superintendents all report favourably regarding it. According to Dr. Martin, there was "no difficulty in preserving it (in Sind) through the hot weather." In Bombay it is reported to be "of good quality;" in the Concan Division "could not

be surpassed in excellence;" in the Northern Deccan Division it was "of excellent quality;" in the Southern Deccan "good throughout;" in Eastern Guzerat "good and effective;" and in Western Guzerat "generally good."

5. The mode of securing and forwarding vaccine matter, mentioned by Dr. Davey,* should be widely made known, and thus, perhaps, such statements as those made by the Civil Surgeon, Surat, viz. that "all attempts to renew the lymph had failed," and again in the following year "deteriorated and never renewed," may, in future, be avoided. The Civil Surgeon, Ahmedabad, it should be observed, appears to have always had abundance of lymph available to meet the want of neighbouring medical officers. Surat should therefore have been supplied from thence; for besides Surat being the head quarters of the Superintendent of the Eastern Division of Guzerat, it was that officer's duty, as a well as that of the Civil Surgeon, to insure the propagation and continuance of good lymph at Surat; and it is strange that the want of it should have escaped observation.

6. *Bombay.*—The Governor in Council regrets to learn, from the very creditable report of Sub-Assistant Surgeon Anunta Chundroba, that so many obstacles exist in the Island of Bombay to the progress of vaccination. Only 8,000 vaccinations are reported to have been performed by the Government Establishment, which seems but a small number out of the large population of this Island. Some of the remarks in the Sub-Assistant Surgeon's report suggest a doubt, in which His Excellency fully concurs, whether the substitution of vaccination at stations for domiciliary visits has been a judicious measure. The Principal Inspector-General should report on this question. The malpractices of peons, now brought to notice, should hereafter be particularly reported on.

Concan.—It is satisfactory to Government to be informed of the steady progress of vaccination in the Tanna Collectorate through the exertions of Dr. Beatty, judiciously assisted, as he has been, by the Collector. Government trusts that there will be no falling off in the numbers vaccinated in the Rutnagherry Collectorate by the discontinuance of the percentage system of payment, which, for the reasons given, was an advisable step.

Northern Deccan.—The Superintendent of the Northern Deccan Division appears to have bestowed much thought upon the organization of the Department, to the defects in which he attributes the stationary condition of the returns. In this he is borne out by several of the Superintendents; and the subject should be reported on by the Principal Inspector-General in connection with the new scheme of vaccination which Government have lately ordered to be carried out.

---

* p. 13 *ante*.

Guzerat (Eastern Division).—The reports of vaccination in the Eastern Division of Guzerat for both years are most meagre, and indicate an amount of supineness on the part of past Superintendents, which should have received more timely check from the Medical Department.

Guzerat (Western Division.)—Several of the suggestions made by the Superintendent in his Report for 1859 appear worthy of attention, and should be acted upon, as far as possible, under the new system. In the Report for 1859 the want of assistance, on the part of the local native authorities, is brought to notice. Under the views of Government, as above expressed, it is hoped this will not be repeated.

Sind.—In this province the reverse appears to be the case; for Dr. Martin reports, in 1858, that "the successful working of the Establishment is in a great measure due to the assistance and countenance of the Collectors and Deputy Collectors of the province;" and in 1859 he reports the same expressions, but in stronger language. The Governor in Council, though inclined to attribute the very large percentage of successful operations to the returns having been to some extent falsified, agrees with the Principal Inspector-General "that there can be no doubt that Dr. Martin has gained the confidence of the people, and is entitled to great praise;" and is also glad to acknowledge the cordial assistance which the District Civil Officers have at all times afforded to Dr. Martin.

Kattywar.—The very clear statement of the rise and progress of vaccination in Kattywar by Dr. Lord, shows the interest he has taken in the work.

7. There does not appear to be anything in the other reports which call for particular remark.

(Signed) M. J. SHAW STEWART,
Under-Secretary to Government.

Bombay Castle, 23rd April 1861.

P. S.—Printed copies of the Vaccination Report for 1857 and 1858 and of this Resolution should be distributed as usual, and sixty copies furnished to Government, for transmission to the Home Authorities.

BOMBAY:
PRINTED AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR THE YEAR 1860.

Bombay:
PRINTED FOR GOVERNMENT
AT THE
EDUCATION SOCIETY'S PRESS, BYCULLA.

1861.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR THE YEAR 1860.

No. 1919 OF 1861.

From the PRINCIPAL INSPECTOR GENERAL, Medical Department,

To the SECRETARY to GOVERNMENT, General Department.

SIR,—Agreeably to the latter part of the 2nd paragraph of Government Resolution No. 521, of the 23rd April 1861, I submitted upon the 30th May, in my letter No. 1144, a brief sketch of the working of the Vaccination Department for 1860. I stated that all the returns for that year had not reached me at the date of the Government Resolution in April, and that it would take some considerable time to tabulate and arrange the various details and returns, but that Government were in possession of the principal facts and statistics before the 1st June. Anticipating a reply to that reference, no action was taken towards printing the individual reports until your letter No. 1010, of the 2nd August, was received, when the proofs were sent to the Press, and I have now the honour to submit the fuller and more detailed report for the information of His Excellency the Governor in Council, and for transmission to the Home Government.

2. The year 1860 was characterised by a large addition to the numbers vaccinated over the preceding year, the increase being upwards of (21,000) twenty-one thousand; or, in other words, nearly *two lacs and three quarters* of individuals were vaccinated in 1860, whilst *two lacs and a little more than half* were vaccinated in 1859. The number of unsuccessful and doubtful cases was about 8·4 per cent., and hence about (23,000) twenty-three thousand have to be removed from the calculation, leaving upwards of *two and a half lacs* of individuals who

(if the reports and returns represent an approximation to the truth) have been efficiently protected from Small-Pox.

3. The agency which has effected this amount of work has been as heretofore, the Vaccinating Establishments under Superintendents, Civil Surgeons, and Native Chiefs.

4. The vaccinations performed by the former, viz. seven Assistant Surgeons as Superintendents, and one Sub-Assistant Surgeon in Bombay, aided by 112 Native Vaccinators, amounted to 195,132, or, discarding the unsuccessful cases, to 182,933, *i. e.*, 93·7 per cent. of success (*see* Table No. 1, Appendix); those performed by Civil Surgeons at the several Zillah stations, assisted by 20 Native Vaccinators, were 28,408, or 24,170 successful cases, being only 85·1 per cent. of success (*see* Table No. 2, Appendix); and lastly, those performed by Vaccinators, to the number of (65) sixty-five, under Native Chiefs' agency (paid for by the Rajas and Native Chiefs), and whose work is supervised by the Superintendents, were 50,893, or about 44,334 with success, being above 87·1 per cent. (*see* Table No. 3, Appendix).

5. The Superintendents of Vaccination were at their posts nearly all the year, with the exception of Dr. Lord, who only returned at the end of 1860 from sick leave to England, but whose duties were satisfactorily carried on in his absence by Assistant Surgeon Hewlett. Before the year expired, however, three Superintendents left on medical certificate for England, viz. Dr. Beatty of the Concan Division, Dr. Ross, of the Eastern, and Dr. Thorp, of the Western Division of Guzerat, and to their failing health and departure from India the meagreness of their reports should be ascribed. Their places were not filled up by Government; consequently, in the last three months of the year—and the most favourable period for travelling,—there was no tour of inspection made either in the Concan or in Guzerat, as the Civil Surgeons of Tanna, Surat, and Ahmedabad who were in charge of the Superintendent's offices, could not leave their station medical duties.

6. Assistant Surgeon Plumptre, the Acting Superintendent of the Northern Deccan Divison, made a careful inspection of the work in the Ahmednuggur and neighbouring Collectorates, both before and after the monsoon. It will be seen at page 3 of the following Reports that he shows a very satisfactory increase of the number vaccinated, and which I believe to be due to tact and judgment in his intercourse with the people, and to zeal in the discharge of his duties. The observations on the difficulty of propagating vaccination have con-

siderable interest; and the remark that in a part of the country hostile to vaccination more labour is expended in vaccinating 50 than 500 in districts where no prejudice exists, is very just. Assistant Surgeon Plumptre will have shortly a larger circle to attend to, the Tanna Collectorate having been added to his Division, under the new arrangements regarding vaccination lately sanctioned by Government.

7. The Southern Deccan Division was carefully gone over last year by the Acting Superintendent, Dr. Peach, and I point with satisfaction to his interesting Report at pages 4 to 7. This large Division is now constituted the "Southern Circle," and has added to it the Rutnagherry Collectorate, and hence it will require increased exertions on the part of both the Superintendent and his Deputies.

8. For many years past the energetic Superintendent in Sind, Dr. Martin, has shown progressively increasing numbers of persons vaccinated. In 1860 there were upwards of 10,000 individuals vaccinated over the previous year. It is true that prejudice to the operation has almost vanished from the province, and that vaccination is much more practised than formerly, but nevertheless it must be remarked that it greatly preponderates in favour of children *over* one year of age. Vaccination of infants *under* that age amounted only to about 16,000, whilst there were 43,000 *above* one year old, and probably many of them were adults (*see* Table of Ages in the Appendix). Dr. Martin's report, as usual, repays a careful perusal.

9. In the Presidency Town of Bombay Sub-Assistant Surgeon Anunta Chundroba was absent for two months, owing to illness, otherwise he has maintained satisfactorily the efficiency of vaccination. I anticipate, before the close of the present year, a special report on the plan of Dr. Peet as carried on in Bombay, when the latter part of paragraph 6 of Government Resolution No. 521, of the 23rd April, will be specially reported on.

10. I found it desirable to introduce during the year a form of daily employment report, as giving me a clearer insight into the movements of Superintendents than I before possessed. The return, which is submitted upon the 1st day of every month, shows, opposite to each day,—the Zillah, Talooka, or Station in which the Superintendent is located; the distance in miles from the last station he has travelled; the Vaccinator whose work is being inspected, and the number of children the Superintendent himself has seen. The return was not at first fully understood, or acted up to, by Superintendents, and was only

made use of for a portion of the year, otherwise it was my intention to have an analysis of the return made and published, and hereafter such a course will be adopted.

11. I reproduce the Despatch No. 5, of the 20th February 1860, from the Secretary of State for India, relative to Superintendents passing in the Native languages—

"I have to express my approval of your orders that Superintendents of Vaccination should be required to pass an examination in the Vernacular language of the District in which they are employed."

12. Regarding the Native Vaccinators, I have still to report, with regret, that I have had summarily to discharge several upon the representations of Superintendents for dishonesty in making false returns, and that this radical evil baffles all attempts to remove it by milder means.

13. But the dismissal of a Vaccinator brings with it only present punishment, as, having no superannuation pension to look forward to, his discharge from Government employ is not regarded in the same serious light as it would be if thereby he forfeited a certain provision for the future. Again, the want of a superannuation pension tends to keep in the Department many good men who are long past active exertion, and who are physically unfit for the efficient performance of their duties. There are two or more such instances at the present time of Head Vaccinators who have been all their lives in the Department, are now worn out from age and infirmity, and should make way for more active men. They draw the highest rate of pay, viz. Rupees (24) twenty-four per mensem. The Superintendents however hesitate to recommend their dismissal, knowing that thereby the Vaccinators so discharged must starve from sheer want. It appears to me that Native Vaccinators should be classed as uncovenated servants, and should be brought under the same rules regarding pension. Having before pressed this subject on the attention of Government, I can only at the present time recommend the claims of Native Vaccinators for favourable consideration, trusting that His Excellency the Governor in Council may be pleased to pass some definite orders on the subject.

14. I beg to refer to Table No. 5 of the Appendix regarding "Small-Pox," the results of which are, I think, extremely satisfactory. Amongst European Troops there were out of a strength of 16,000 only (42) forty-two cases, and four 4 deaths; amongst Native Troops there were only (55) fifty-five cases, and two (2) deaths, out of a strength of 37,000, and only one case, and no death, in all the Jails of this Presidency. In

the Civil Hospitals there were (55) fifty-five cases of Small-Pox treated, and (15) fifteen deaths, the greater number of which occurred at Aden.

15. Full details of every particular regarding Vaccination will be found in the Appendix, and it will be seen that the different "*sexes*" vaccinated stood in the relation of 54 males to 46 females per 100; and of "*castes*," there were Hindoos about 70 per cent., Mussulmans 25, other castes, 3·8, Christian 0·4, and Parsees 0·2, per cent; and with respect to "*age*," there were 67·5 above one year, and 32·5 per cent. below one year, showing that the necessity for infantine vaccination is still unrecognised by the mass of the people.

I have the honour to be,
Sir,
Your most obedient Servant,
B. P. ROOKE, M.D.,
Principal Inspector-General,
Medical Department.

Bombay, 22*nd September* 1861.

P. S.—Since the above Report was in type, your letter No. 1366, *of the* 28*th September* 1861, *has been received, requesting that steps may be taken to ensure the despatch of their reports by Superintendents on the* 1*st of March of each year, to allow the general report being forwarded to Government on the* 1*st May, which I beg to state shall be attended to.*

30*th September* 1861.

INDEX TO THE FOLLOWING REPORTS.

PAGE

VACCINATION UNDER SUPERINTENDENTS—

Presidency Division 1
Concan do. 2
Northern Deccan do. 3
Southern Deccan do. 4
Eastern Division, Guzerat 7
Western Division, Guzerat 7
Sind Division 9
Kattywar Circle 11

VACCINATION IN THE NATIVE STATES—

Southern Deccan Division 12
Eastern Guzerat 16
Western Guzerat 15
Sawunt Warree 12
Bhooj, Kutch 17
Peint (Nassick) 17

VACCINATION UNDER CIVIL SURGEONS—

PAGE

Tanna 18
Poona 18
Ahmednuggur 19
Sattara 20
Sholapore 20
Dhoolia 21
Nassick 22
Ahmedabad 22
Kaira 23
Rajcote 24
Surat 24
Broach 25
Belgaum 25
Dharwar 26
Kolapore 26
Rutnagherry 27
Kurrachee 28
Hydrabad 28
Shikarpore 29
Aden 29

APPENDIX—

Vaccination under Superintendents .. .. Table No. 1
Do. do. Civil Surgeons .. .. No. 2
Do. do. Native Chiefs .. .. No. 3
General Abstract of Vaccination .. .. No. 4
Table of Small-pox .. .. No. 5
Table of Ages .. .. No. 6

VACCINATION UNDER SUPERINTENDENTS.

PRESIDENCY DIVISION.

Local Superintendent.—Sub-Assistant Surgeon ANUNTA CHUNDROBA.

Establishment.—Three Vaccinators and Seven Peons.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	7,999	....	710	6,532	81·6
1860....	8,027	28	....	6,760	84·2

THE past is the second complete year of vaccine operations in accordance with the scheme proposed by Dr. Peet.* Eight thousand and twenty-seven persons have been vaccinated; being an excess of 28 over the number for 1859, and 303 over the average number for the past five years. Of these, 4,458 were males, and 3,569 females; 661 were Christians, 5,879 Hindoos, 1,141 Mahomedans, 307 Parsees, and 39 of other castes; 3,502 were under, and 4,525 were above one year of age. Of the latter, however, only 245 were above 10 years of age. Of the total number of operations performed, 6,760 were successful, or a percentage of 84·2 on the total vaccinated; 682 were failures, and 585 doubtful. Of those returned as doubtful a great many, if not all, were probably successful, as parents, in their anxiety to prevent their children having matter taken from them, remove or conceal them, so that the result cannot be positively ascertained; consequently they are returned as doubtful, the percentage of successful is thus, to a certain extent, lowered.

The operations of the Vaccine Department were, during the past year, materially affected by several circumstances. It has been often remarked that, apathetic as the generality of natives are regarding their children being vaccinated, the prevalence of Small-pox does not fail to rouse them to a sense of danger, and they throng the vaccinating stations in great numbers. During the past year Small-pox did not prevail to any considerable extent; consequently the great incentive to their having their children protected being wanting, the attendance at the stations was comparatively small. There was, besides, great prevalence of measles, fevers, and hooping cough during those months, when generally the attendance of children to be vaccinated may be expected to be greatest. It has also been usual for Coolies proceeding to the Mauritius to be vaccinated previous to their departure; and this, to a certain extent, in former years, increased the number of vaccinated. During the past year, however, the number of such persons vaccinated was very limited. Even the Arabs, from on board the bugalows from Muscat and other parts of the Arabian coast, were not so numerous as usual. All these circumstances conspired to prevent the number from coming up to what was expected at the commencement of the year. The continued supineness of the

Parsees, with respect to Vaccination, is quite inexplicable. At the commencement of the past year, the authorities of the Fort Gratuitous Dispensary having requested that a Vaccination Station might be opened in connection with it, for the benefit of the Parsee community and others desirous of having their children vaccinated, and several Parsee Graduates, interested in the working of the Dispensary, having promised to try their influence to induce persons to bring their children there, a station was opened in connection with it; but I am sorry to say that, notwithstanding the unremitted exertions of the parties concerned, the attendance of Parsee children was not at all encouraging.

The obstructions in the way of the spread of Vaccination; as stated in the last Annual Report, continued to be more or less powerful as before. The result of the operations of the past year, however, has been rather favorable; inasmuch as the greatest part of the total vaccinated were children, there being only 245 persons above 10 years of age in the whole number. During the year all the districts of Bombay and Colaba have been visited. The lymph in use has been of good quality; and the vesicles produced, for the most part, of a genuine nature. The conduct of the subordinates has been unexceptionable.

CONCAN DIVISION.

Superintendent.—Assistant Surgeon T. B. BEATTY. (*S. C. to England.*)
Establishment.—Eighteen Vaccinators.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	39,669	....	6,314	36,971	93·1
1860....	45,773	6,104	....	43,178	94·3

THE total number of persons vaccinated during the past year was 45,773, whilst in 1859 there were 39,669, showing an increase of 6,104. Of the number vaccinated there were 43,178 successful cases recorded, or 94·3 per-cent. on the whole; and of those vaccinated, 23,294 were males, and 22,479 females, showing an excess of 815 in favor of the males; 39,090 were above the age of one year, and 6,683 below one year. The conduct of the Vaccinators has been satisfactory.

Dr. Beatty, the Superintendent, left on sick certificate for England before the end of the year. He states, that during January 1860, "I was acting as Civil Surgeon at Tannah, and only on the 18th of February proceeded into the districts. The Talookas of Kolwan and Morbar (Tannah Collectorate) were visited, the work of two Vaccinators examined, upwards of 600 children who had been vaccinated were inspected, and I was well satisfied with the work and lymph of the Vaccinators in this part of the district. During the month of March I visited and examined the work in three Talookas in the Tannah Zillah, besides a portion of Colaba; about 640 vaccinated children were seen, the lymph and vaccine pustules were found to be excellent, and their work carefully performed. On the 19th of the month I left the Tannah Collectorate, and proceeded to Colaba, in which districts I was engaged during the remainder of the month; about 550 children in the Colaba districts were inspected this month. In the month of May I commenced my inspection in the Rutnagherry Collectorate. The Talookas of Severndroog and Unjunwell were thoroughly visited, and the work and

lymph examined; upwards of 1,500 children who had been vaccinated were inspected. The work was most satisfactory. On the 23rd of the month, owing to the setting in of the monsoon, I returned to head quarters at Rutnagherry. The parts of the Division which have not lately been visited, and which it was my intention to have gone to had I remained, are the entire of the Southern Concan Districts and Sawunt Warree,—the latter State having been added to this Division during the year.

NORTHERN DECCAN DIVISION.

Acting Superintendent.—Assistant Surgeon F. H. PLUMPTRE.
Establishment.—Eighteen Vaccinators.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	20,013	....	770	19,018	95·0
1860....	21,700	1,687	....	20,478	94·3

IT is with pleasure I am able to draw attention to the increased number vaccinated during the past year, as compared with the year previous, presenting a higher number returned than any year since 1856. An examination of the monthly returns for the year will exhibit that the credit of this increase is due to my predecessor, as it was during the months he held charge of the office that the increase is most marked.

The great obstacles to the progress of Vaccination are prejudice and indifference. The mere returns of figures are an insufficient criterion by which to measure the zeal of those employed. I believe that a Return of only 50 often represents more harrassing labour on the part of one Vaccinator, than another of 300, in a district where no prejudice exists. The subject of prejudice is peculiar as regards the localities in which it exists. It appears to be greater in large towns than in small villages. It is irregular as regards its locality, it does not seem to extend over any general large extent of district, but may exist strongly in one village, whilst in other villages there is none. The prejudice may be permanent or only temporary. These remarks have especial reference to the Jooneer Talooka, which I inspected closely in November, and in which all these features are presented; thus at Naraingaum, a large town containing a population of about 4,000, the number vaccinated was only about seven, whilst in the small villages around, Vaccination had been fairly carried out among the unprotected. The village of Aosuree, population about 2,000, presents an instance of prejudice being of a temporary character. In the year 1858, the Vaccinator was unable to obtain a single child to vaccinate; the year following this place suffered severely from an epidemic of Small-pox, and many children died therefrom. By a glance at the youthful population of that village, their appearance indicates plainly the serious confluent form in which the disease existed. In the midst of this epidemic, the people requested that a Vaccinator should be sent to them, and the whole of the then unprotected were vaccinated. I have little doubt that when the Vaccinator again visits that locality, he will find no difficulty in obtaining subjects. Another peculiar form of prejudice seems to exist in that Talooka, and partakes of the character of fatalism; many who do not object to having their children vaccinated once, have an objection to the operation being repeated if it fails the first time.

I venture to think that the system of constantly fining the establishment for neglect of duty is a mistake, and records in the office bear me out in the opinion; for it appears that in one year the recoveries for fines amounted to Rs. 87, and yet the number vaccinated that year was actually less than the year preceding, when it amounted to only Rs. 8, a confirmatory proof that fines do not tend to increased exertion. If a member of the establishment is found so thoroughly indolent that he can only be kept to his work by repeated fining, it is better to warn him, and if that is unattended with benefit, to discharge him, and make room for one of the many candidates for employment.

SOUTHERN DECCAN DIVISION.

Acting Superintendent.—Assistant Surgeon W. PEACH, M.D.

Establishment.—Eighteen Vaccinators.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	13,318	....	1,967	12,278	92·3
1860....	13,213	....	105	12,055	91·2

THE decrease in the number of operations, compared with those of the preceding year, although trifling (105), is to be regretted, as it shows that Vaccination is not advancing in popular favour with the natives of this division. Circumstances connected with the establishment have doubtless rendered it less efficient than it might have been during the year. The death of the Head Vaccinator in October 1859 caused a vacancy, which, owing to a doubt in the mind of my predecessor as to the expediency of promoting to the highest grade any of the subordinates, was not filled up until the month of June of this year, and his substitute was inexperienced, and consequently the returns were diminished. Three of the establishment have been dismissed during the year, and their places filled by younger and less able hands; four Vaccinators have been absent at different times on account of sickness, their absence in the aggregate extending over a period of thirteen months, by which the services of one Vaccinator may be said to have been entirely lost. The above circumstances have all, to a certain extent, influenced the returns, as regards numbers. Want of zeal and energy, as well as of ability, on the part of some of the establishment, have probably also had an effect; nevertheless, I think that the real cause of the non-extension of Vaccination in this Division is to be found chiefly in the prejudices of the population, and the apathy and indifference evinced by the native officials generally. The following table exhibits the amount of work performed in the different Collectorates by Goverment Vaccinators, the number employed in each Collectorate, with the average number of operations during the year. It will be seen that the work in the Belgaum and Sattara Zillahs exceeds considerably that in the Dharwar and Sholapore; the average in these districts, especially the last, being very small. The difference observable in the percentage of success appears to depend upon the larger number of doubtful cases returned by the Vaccinators in the Sattara and Sholapore districts :—

Collectorates.	Number of Vaccinators employed.	Total of operations during the year.	Yearly Average by each Vaccinator.	Percentage of Success.
Belgaum	5	4,349	868	93·5
Sattara	5	4,205	841	88·3
Dharwar	4	2,869	717	93·9
Sholapore	3	1,790	596	88·0
Total..	17	13,213	777	91·3

As usual a larger proportion of males have been vaccinated during the year than females, the percentage being males 54·4, females 45·6; of caste, the Hindoo predominates greatly, the proportion percent. being of Hindoos 87·8, Mussulmans 9·5, Christians 0·4, other castes 2·2. As regards age, the proportions are, under one year 30·6, above one year 69·4,—much the same as those of the year 1859. The age of the majority of the children brought for inspection ranges usually between two and seven years, and there appears to be a general unwillingness, in this Division, to have the operation performed on infants of very tender age—very few adults present themselves. The Column of Result exhibits of successful operations, 12,055 or 91·0 per cent; unsuccessful operations, 652 or 5·0 per cent; doubtful operations, 506 or 4·0 per cent.

The percentage of success is somewhat less than that of the preceding year, 91·2 against 92·3, but this depends upon the increase under the head of "doubtful." The condition of the lymph has been reported generally as good throughout the Division during the year. That inspected has been found, with one or two exceptions, to be satisfactory, producing healthy vesicles. Wherever it has shown signs of deterioration, it has been in the hands of careless or inexperienced Vaccinators, and whenever it has been found failing in characteristic qualities, an immediate renewal has been directed. Small-pox has prevailed in the four Collectorates during the year 1860, but not in a manner equal, either in extent or virulence, to the epidemic of 1859. The districts in the Sholapore Collectorate appear to have suffered most from the disease, or it may be that the reports from this quarter are more complete than from others. The Belgaum districts, if the returns can be relied on, suffered the least. It is a question whether this epidemic of Small-pox of 1859 may not have had an influence on the returns of Vaccination for 1860, by diminishing the number of subjects for the operation throughout the different districts. Presuming that those attacked by Small-pox were chiefly of tender age, the deaths alone removed 3,578, children, and the Vaccinators, according to their instructions, would not think of operating upon children who had already suffered from the disease, even if they were presented by the parents. It does not appear, however, that the prevalence of Small-pox, and the great mortality caused by it, has had any effect upon the minds of the population, or in any way contributes to diminish their prejudices against Vaccination. No case of inoculation has been reported during the year. In the absence of information upon this subject, I am not aware that this pernicious practice still prevails in the Kolapore States.

Where nearly all classes of the native population of the country are alike ignorant, prejudiced, and averse to innovations, even when intended for their benefit, it is very difficult to suggest any measures by which Vaccination may be extended amongst them. Until all the native officials, from Mamlutdars downwards, are in a manner compelled to interest themselves and exert their influence in the cause, the Vaccinators will have to struggle against difficulties, which they would not encounter were these officials disposed to afford them cordial assistance. The European civil authorities, I believe, wish well, and give such assistance as they are able to afford, by writing orders to their native subordinates, and by making inquiries

on the subject when visiting the districts; but more than this is required, and *until the active co-operation of the Native officials is secured, no great result can be expected;* as far as my observation goes, the Mamlutdars generally take no interest in the progress of Vaccination, and give really very little aid to the Vaccinators. Neither do they trouble themselves to combat the prejudices of the lower classes, or to enlighten their ignorance as to the benefits afforded by successful Vaccination; apparently they look upon every thing connected with the subject as foreign to their own proper duties, and it is only in exceptional instances that active assistance is afforded by them. I have found, during my tour of inspection, that my presence in a talooka was evidently considered tiresome; and instead of the Mamlutdar or his deputy coming forward with alacrity to consult as to the best means to be adopted for the extension of Vaccination, they, as a general rule, hang back, and on more than one occasion I have been compelled to call the attention of their superiors to the slight and incivility I have experienced from the chief native officials during my stay at the station. The Mamlutdar's example is naturally and generally followed by those beneath him, down to the village Patels, who, had they the will, have the power of rendering immense assistance, but not unfrequently exercise it in the wrong direction. To give one or two examples which have lately come to my knowledge:—

A Vaccinator attended at a village for the purpose of operating, taking with him lymph. He stated his errand to the Patel, and requested his assistance in collecting subjects for vaccination. The Patel went round and informed the villagers that a Government "Doctor" had come to the village for the purpose of making wounds (to "dig holes" was the phrase employed) in their children's arms, but that the operation would not be performed, if each gave him (the Patel) four annas. Of course the Vaccinator did little work in that village.

This is not a Vaccinator's story. I give it as related to me by the Assistant Collector in charge of the district in which the occurrence took place, who very properly suspended the Patel. Again—

A Vaccinator reports that he went to a certain village, and, in like manner, requested the Patel for assistance in collecting subjects. This official informed him that the god must first be consulted as to whether Vaccination was proper or not, and that he would have to wait until evening for a reply. The Vaccinator did wait, and, when evening came, was told by the Patel that the god considered Vaccination was not proper. The consequence being that the Vaccinator's day's work and lymph were lost.

I have heard of natives consulting their gods on important occasions, but I never before heard of a Patel answering for a whole village. I merely mention these facts as instances of obstruction which Vaccinators have to meet with whilst performing their duties; obstructions which would not exist could the native officials be brought to a right feeling on the subject. Besides the prejudices of the people, the Vaccinators, in this Division especially, have other difficulties to contend with, and which militate considerably against the extension of their work. The large towns are few in number, the villages generally widely scattered, with a scanty population, and the districts allotted to each Vaccinator of very large extent. A day is often spent entirely in passing from one village to another, and on the Vaccinator's arrival, he may probably not find more than two or three children whose parents are favorable to the operation. There is also much difficulty experienced in conveying the lymph from village to village, parents having an almost insuperable objection to their children being removed for this purpose. Glass plates, therefore, are frequently made use of, by which the activity of the lymph is endangered. I am averse to the granting of travelling batta, as liable to abuse, unless the whole establishment could be under the immediate eye of the Superintendent, but I really think that if something could be given monthly to the Vaccinators in the way of "Pony allowance," obliging them to keep an animal, it would remove some of the difficulties now existing, and would enable them to visit three, four, or more villages in the course of a day, instead of one, as is often the case under present circumstances. I decidedly think that if a grant of the kind, as above recommended, is required any where, it is in this Division, and for the reasons I have

given. Want of energy and zeal on the part of the Vaccinators—as establishments are at present constituted—can only be met by more effective supervision, but the Division is of that extent, that it is impossible for the Superintendent to visit each Vaccinator more than once in two years, if he can accomplish this. A higher rate of pay, with the prospect of a small pension, would do very much in bringing forward a superior class of persons as Vaccinators, who might, with occasional inspection, think it worth their while to be zealous, energetic, and honest: but much has already been written on this subject, and it is unnecessary for me to say more.

EASTERN DIVISION, GUZERAT.

Superintendent.—Asssistant Surgeon C. Ross. (*S. C. to England.*)

Establishment.—Seventeen Vaccinators.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	21,871	1,368	....	18,894	86·3
1860....	20,574	....	1,297	17,479	84·9

The Superentendent states that during his tour, extending from the beginning of the year to the monsoon, "I visited all the Vaccinators in the Division, * * * * * constantly recurring attacks of fever compelled me to return to head-quarters about the middle of May. I was, in consequence, prevented from extending my tour to the Rajpeepla and Rewa Kanta States, which have been unvisited for years." After the monsoon Dr. Ross left on sick certificate to England, and the temporary charge of the office devolved upon the Garrison Surgeon, Surat.

WESTERN DIVISION, GUZERAT.

Superintendent.—Assistant Surgeon R. T. Thorp, M.D. (*S. C. to England.*)

Establishment.—Fifteen Vaccinators.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	20,802	....	2	18,693	89·8
1860....	22,020	1,218	....	20,068	91·1

The Civil Surgeon, Ahmedabad, in temporary charge of the office at the close of 1860, states that the Superintendent was on his tour from January to June, visiting the Prantej, Morasa,

and Hursolee districts, but the greater part of his time seems to have been devoted to the Native Chief's Establishment, employed in the neighbouring Myhee Kanta States. Dr. Thorp left on sick certificate to England in November 1860.

Dr. Wyllie states:—"A considerable increase is shown in the numbers vaccinated in the past year, as compared with those during the previous year, and the difference is due to greater activity on the part of the various Vaccinators, who have been required, under penalty of fine, to perform at least 30 operations each per week. Some such measure as this was certainly called for by the large decrease noted in 1858 and 1859, and the inforcement of a forfeit when a fixed minimum of duty is left unperformed, appears to me to work well, and to promise better things, while it is scarcely open to any suspicion of fraud, with sharp supervision and a strict system of check to verify the Vaccinators' Returns."

"In respect of sex, the number of males vaccinated has ever exceeded that of females. During the past year there were 11,378 of the former to 10,642 of the latter; and these relative proportions correspond closely with the experience of former years. As to age, the numbers were 15,782 "under one year" and 6,238 above that period; in other words, full two-and-a-half operations in the first-named category, against one in the other. The difference in this direction, which for some years past has been gradually becoming more noticeable, has now exceeded what it has hitherto been; and the comparative scarcity of patients "above one year"— a suggestive fact in itself—is a matter not without interest and significancy, in reference to the progress of Vaccination among the population. The results must be considered as in every sense satisfactory; 20,068 having succeeded, out of a total of 22,020 operations. The ratio per cent. of successful cases has thus been 91·1, while that of the unsuccessful amounted to 5·4, and of the doubtful to 3·5. These figures compare favorably with past results, the average of success for the previous five years being but 88·4. The lymph continued good throughout the year, and as far as can be known from the Vaccinators' reports, the resulting vesicles were well formed and normal, with exception of two instances. No case of Small-pox was met with, a fact somewhat unusual, and one that has contributed in no small degree to place the amount of work done in unfavorable comparison with what obtained prior to 1857; inasmuch as the fears of the people are ever awakened by the appearance of the epidemic, which invariably acts as a stimulus to Vaccination. On the other hand, measles prevailed among the infantile population, from February to August, throughout the length and breadth of the Zillah, tending for the time to retard the spread of the prophylactic; and cholera also was present in Dhollera, Dhundooka, the Duskorie, Veerumgaum, and Prantej, from February to June. No instance of inoculation has been reported. The practice appears to have quite died out in the Government territory, although still employed in the neighbouring state of Marwar, where Vaccination will doubtless ere long displace it. As to the people at large they cannot be said to offer opposition, not a single instance of antagonism having been brought to notice. While some accept Vaccination willingly, the vast majority would appear to be absolutely indifferent, and the Vaccinators' reports are unanimous in representing the Mussulman portion of the population as being more inaccessible, and exhibiting less appreciation of the boon extended than the Hindoos. I regret to have had no opportunity of personally testing this fact, but accept it as trustworthy, because it is strictly in accordance with what passes daily under my own observation in the city. The system at present obtaining for the spread of Vaccination appears to work satisfactorily."

SIND DIVISION.

Superintendent.—Assistant Surgeon T. E. P. MARTIN.

Establishment.—Fifteen Vaccinators.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	49,525	2,395	....	48,843	98·6
1860....	59,568	10,043	....	58,939	98·9

THE above table shows an increase of 10,043 in the number of operations during the year, as compared with 1859. The number vaccinated by each Vaccinator varies, as they must ever do. In addition to the difference in the general aptitude of individuals, another circumstance may be stated as influencing the quantity of their work, viz: that the districts are now many of them become fairly under the influence of Vaccination, consequently fewer subjects will present themselves for the operation than formerly, when there were large areas in the Province where a Vaccinator had never been seen or heard of, and the whole population under ten years of age were ready to receive the benefit of Vaccination. This rough work, so to speak, has now very generally been accomplished. The work of the Vaccinators has been satisfactory, and they are, for the most part, unanimous in their testimony that the people are willing, and generally desirous to have the benefit of Vaccination. They complain of but one general difficulty, which arises from the dislike of the people to have their children taken out of their own village to one near it, to keep up the supply of lymph. Fresh lymph from vesicles is the only safe vehicle for successful and extensive Vaccination, and the large percentage of success in the operations is solely attributable to its use. Not a little diplomacy is occasionally required to secure a supply of what in Vaccination may be called the "Vital fluid."

There were vaccinated during the year under report 34,242 males, and 25,326 females, showing an excess of 8,916 in the former class. A steady disproportion in the sexes is a noticeable and regular feature in the Vaccination Returns. On children one year of age there were 15,937 operations, above that age 43,631. The number of successful cases, 58,939, compared with the total number vaccinated, 59,568, gives 98·9 as the percentage of success in the operations of the year.

The vaccine lymph continues in good condition. Its character does not appear to have deteriorated, as far as can be judged from the appearance of the vesicle. Its prophylactic powers also, there is good reason to consider, are unimpaired. No more decisive proof of this valuable property can be adduced than, that up to this time after four years' experience, not one case of death from Small-pox has come under observation, in which the cicatrices after Vaccination could be found. This, though a general fact only, still as it stands embodying the observations of the establishment for so long a period, Small-pox never having been wholly absent from the Province during either of these years, and coupled with the growing knowledge of the people as to the amount of protection which Vaccination is affirmed to secure, and the sure objections which would have been urged by them had the result fallen visibly or notably short of what they had been encouraged to anticipate, it would seem fair to regard this gene-

ral fact as encouraging to the efforts of the establishment, and it is hoped as matter of satisfaction, as far as it goes, to Government. Epidemic Small-pox, of a more or less severe type, seems never for any considerable period to leave the Province. In last year's Report I drew attention to a serious epidemic in the Sacra Talooka of the Jerruck District. The commencement of this year found the disease at Sukkur among the families of the 2nd Belooch Regiment, en route to Hydrabad; no mischief was done, though two large towns, Sukkur and Roree, may be supposed to have been in danger from the presence of so many cases of Small-pox. Both these important towns are fairly protected by Vaccination. In the course of the year occasional or sporadic cases of Small-pox were reported, and towards its close in November, a tolerably active epidemic was brought to my notice by the Civil Authorities in the Halla District at Shahdadpore, subsequently appearing in the town and neighbourhood of Halla. It was reported to me that one or two deaths occured daily, but actual examination did not bring satisfactory evidence that there had been so great a mortality from Small-pox. It is usual to suppose that the average number of deaths to cases is 1 in 6, so that, had there been twenty deaths (and more than this number had been reported) there should have been about 100 cases left, more or less scarred by the disease, to support the bill of mortality. In the town of Shadadpore there were about 350 cases of Vaccination, and on two occasions a miscellaneous collection of people, young and old, were gathered about me, probably the larger proportion of the inhabitants of the town came under my personal notice, but I could not discover a single case of recent Small-pox, and in all the neighbouring villages into which my work took me, no sign of recent disease was observed. There are several affections common to the young, any or all of which may be, and indeed are, frequently mistaken for true Small-pox by the people—"Onee," "Lacra," "Kakra," are the native terms for these affections. It may be remarked that all the common diseases known in Europe have their types in Sind, with singularly slight modifications from climate and colour of skin. Reviewing the work of the year, it is satisfactory to be able to state that the people are increasingly favorable to Vaccination, and that the Vaccinators move about among them without exciting any ill-feeling of their work, or raising up a spirit of resistance to the propagation of a great benefit.

KATTYWAR CIRCLE.

Superintendent.—Assistant Surgeon R. G. LORD, M.D. (*S. C. to England.*)

Establishment.—Eight Vaccinators (Government).
Nineteen Vaccinators (Native Chiefs).

Establishment.	Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government	1859....	4,744	455	....	4,287	90·3
	1860....	4,257	....	487	3,976	93·4
Native Chiefs ..	1859....	13,359	3,787	....	11,992	89·7
	1860....	13,234	....	125	11,897	89·8

THE Civil Surgeon, Rajcote, was in England on sick certificate during the year 1860, and only resumed charge of his duties as Superintendent of Vaccination, Kattywar, at the end of the year. During his absence several medical officers held charge of the office for longer or shorter periods. In March, Assistant Surgeon Hewlett commenced a tour of inspection, and visited Gondul, Jaitpoor, Joogagurh, Mallia, Verawah, when he joined the camp of the Political Agent, and continued the tour until the beginning of June, when he returned to Rajkote. After the rains he made another tour during the months of October, November, and part of December. The Acting Superintendent reports: "Of the total number 4,257 vaccinated by the Government establishment, 2,248 have been males, 2,009 females; 2,445 children were under one year, and the remaining 1,812 above. Of the whole number, 3,976 cases have proved successful, giving a percentage of success of 92·4, which is slightly above that of the preceding year. The Native Chiefs' establishment have vaccinated 72,054, males, 6,029 females; 5,505 were under one year, 7,729 above; of the total 13,234 vaccinated, there had been 11,897 successful, giving a percentage of success of 89·8. The lymph has been generally very good, and the vesicles normal in their size and well filled. There have been no cases of Small-pox reported to have taken place in this province, nor has inoculation, as far as known, been practised. The only obstruction to the spread of Vaccination depends upon the natural apathy and religious prejudices of the natives. The latter are to be observed more strongly in some districts than in others." The falling off in the numbers vaccinated, the Superintendent considers, is due to the unsettled state in which the Division was in, owing to the many changes amongst Superintendents and subordinates.

VACCINATION IN NATIVE STATES.

SAWUNT WARREE.

Under the Superintendent of the Concan, from whom no special report has been received.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	4,135	....	1,291	3,194	77·2
1860....	4,585	450	....	3,837	83·6

SOUTHERN DECCAN DIVISION.

Under the Acting Superintendent Southern Deccan Division.

Establishment.—Seventeen Vaccinators, employed as follows:—4 in the Sattara Districts, 5 in the Kolapore State, 7 in the Belgaum District, and 1 in the Sholapore District.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	9,900	....	375	9,121	92·1
1860....	9,351	....	594	8,654	92·5

The above table exhibits a falling off in the Returns for 1860, compared with those of 1859, of 549 Vaccinations. This considerable decrease I can only attribute to the ignorance and unwillingness of the people, and the very small amount of interest taken in the work of the Vaccinators by the Native Chiefs who employ them. With one or two exceptions, the Vaccinators generally have been very healthy during the year, so that sickness has not interfered much with their work.

Excluding the Returns of the Savanoor and Ramdroog Vaccinators, as these men have only been working for a few months, the average number of Vaccinations by the sixteen Vaccinators, employed thoughout the year, appears to be 572 and a fraction.

The first of the following Tables exhibits the amount of work done in the different districts by the Vaccinators collectively; the second, the number of operations performed by each Vac-

cinator individually during 1860, contrasted with the returns for the previous year; this also gives the increase or decrease and monthly average, omitting fractions.

TABLE I.

Native States.	Number of Vaccinators.	Total of operations during the year.	Yearly average of the Vaccinators.	Percentage of Success.
Belgaum Zillah	7*	2,567	410	90·7
Kolapore State	5	4,686	937	94·2
Sattara Zillah	4	1,644	411	90·0
Sholapore do.....	1	368	368	96·7
Dharwar do.....	1†	86	86	83 7
Total..	18	9,351	572	92·5

TABLE II.

Vaccinators Employed.	1859.	1860.	Increase.	Decrease.	Monthly Average.	Remarks.
Sattara Districts.						
Phulton	341	372	31	....	31	
Attapadu	281	323	42	....	27	
Jhutt	324	324	....	....	27	
Bhor	596	625	29	....	52	
Kolapore State.						
Bowrah	1,382	1,010	....	372	84	
Veeshalghur	1,403	1,448	45	....	120	
Kagul.....	1,214	659	....	555	55	
Eechul Kurunji.....	718	684	....	34	57	
Gurhingluz	919	885	....	34	73	
Belgaum Districts.						
Koorundwar	163	296	133	....	24	
Sanglee	526	305	....	221	25	
Meeruj	377	524	147	....	43	
Jumkhundee	72	248	176	....	20	
Moodhol	402	376	....	26	31	
Kagwad	608	714	106	....	59	
Ramdroog	..	104	....	....	34	3 months Returns.

* The Ramdroog Jagheerdar's Vaccinator commenced work in October.

† The Savanoor Vaccinator employed for two months only.

TABLE II.—*Continued.*

Vaccinators Employed.	1859.	1860.	Increase.	Decrease.	Monthly. Average.	Remarks.
Sholapore.						
Akulkote	298	368	70	....	30	
Dharwar.						
Savanoor	276	86	....	190	43	Employed for two months only.

The Returns from the five Vaccinators employed in the Kolapore territory, notwithstanding a falling off of 950 operations, as compared with 1859, surpass those of the whole of the remaining portion of the establishment combined. The Veeshalghur Vaccinator appears to be working well, and his Returns have been satisfactory throughout the year. They show a small increase, and exceed considerably those of any other Vaccinator, Government or Jagheerdar, in the Division. The cause of this man's success is probably owing to the favorable situation of his districts. With regard to the short-comings of the Bowrah and Kagul Vaccinators, the only explanation I am able to afford is, that during the year 1859, they were employed in those portions of their districts situated on the Ghât, and adjoining and extending into the Concan, and where no obstructions exist; on the contrary, Vaccination is eagerly sought after by the natives. During 1860 they have been working eastwards, in parts of the country where Vaccination is not so well received. The Vaccinators in the Belgaum and Sattara Jagheers appear to make very little progress. Although seven of them show an increase in their Returns, it is insignificant. The proportions of the sexes vaccinated are—males 54, and females 46. Of caste, the percentage is, of Christians 0·1, Hindoos 90·0, Mussalmans 6·0, and other castes 4·0. A slight improvement is perceptible in respect of age; the proportions being, under one year 28, above one year 72. Of "successful operations" the Returns give 8,654, or 92·5 per cent., a small increase on the year 1859; of "unsuccessful" 415, or 4·14 per cent.; and of doubtful, 282 or 3 per cent.

The lymph has been reported good and healthy generally. It has been lost occasionally, through the idleness and negligence of some of the Vaccinators, but no difficulty has been experienced in renewing it. Some of the Jagheerdar's Vaccinators have occasionally recorded the occurrence of Small-pox in their Monthly Returns, but no regular reports have been received: and in the absence of these, I am unable to furnish any special remark on this subject. Returns from the Kolapore Districts, for a portion of the year, mention 124 cases only, and two deaths. Inoculation has not been reported. I am unable to offer any suggestions under existing circumstances, the control of the Vaccinators being entirely in the hands of the Native Chiefs. I fear that much improvement and progress must not be looked for, excepting, perhaps, in the Kolapore State, where the Vaccinators appear to have settled to their work.

Many of the Chiefs' Vaccinators enjoy advantages not possessed by the Government servants, and there is no doubt that the work ought to progress in a more satisfactory manner, and would do so, were it not for the general indifference evinced by the Jagheerdars. In conversation with those I have visited during my tour of Inspection, they, like our own Mamlutdars, ad-

mit that their people do not understand the objects of Vaccination, and that it is their ignorance, which, at present, obstructs the efforts of the Vaccinators; but it does not appear that they take any steps to overcome impediments, by instructing those under their rule, or by encouraging the Vaccinators in the performance of their duties. They are profuse in promises, but do nothing. The wonder is, that paying as they do the expenses of Vaccination, they do not look for their money worth in return; but the truth I fear is, that they maintain Vaccinators, not from any regard as to the benefits to be derived from their work, but because it is the wish of Government that they should do so, and my belief is, that they understand and care as little about the subject, and the advantages which would accrue, were Vaccination properly and thoroughly practised in their territories, as the meanest of their dependants. The prospect, at present, is very discouraging, and I see little chance of improvement, as long as matters remain as they are.

During my tour I have been received with politeness and attention by the Chiefs whose districts I have visited, with one exception. At Sanglee I was treated with incivility, almost amounting to rudeness, and was obliged to leave the place, as I could obtain no assistance to enable me to carry out my inspection. I reported the circumstances to the Assistant Political Agent, Captain Anderson, (who, I may mention, has, on all occasions, shown every desire to assist me,) and an apology was afterwards made. The year 1860 ended during my stay at Jhutt, and I now close my report by stating that, during the period I have been able to travel (about 3½ months), since assuming charge of the office, I have inspected the work of twelve Vaccinators: seven employed by Government, and five by Native Chiefs, and up to the date of this report, have, in addition, visited three others.

WESTERN GUZERAT.

Myhee Kanta and Palhunpoor.

Under the Superintendent North-Western Division.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	14,511	818	....	12,520	86·2
1860....	17,292	2,781	....	14,753	85·3

The Civil Surgeon, Ahmedabad, in temporary charge of the duties, reports: "There has been a material increase, as will be remarked, in the work done during the year, compared with what was accomplished in 1859. This difference is ostensibly due to a greater degree of activity on the part of the Vaccinators, called for by the enforcement of fine, when, without valid reasons, the number vaccinated falls short of a certain minimum, fixed with reference to the size of the districts, and with a view to each being fully gone over during the year. However well this plan may appear to work, it is not altogether free from suspicion, as possibly leading to fraud, there being no check by which to verify the Vaccinators' Returns,

as in the case of the Government establishment. As to sex, males predominated in accordance with common experience, in proportion of 8,735 to 8,557 females; but the difference in this respect was much less noticeable than usual. As regards age, the majority were "above one year," the number being 9,714 above 7,578 below that term, and these relative proportions correspond closely with results noted in previous years, while they stand in suggestive contrast with the preponderance of operations "under one year," invariably remarked in the Government districts where Vaccination has long been established. The results were not so satisfactory as might have been expected. The percentage of success was only 85·3, in other words considerably below the average of the previous five years, while that of the unsuccessful was as high as 8·8, and of the doubtful 5·9. How far this is due to the presence of measles, and how far to carelessness on the part of the establishment, I have no means of knowing. The lymph remained good, exhibiting no tendency at any time to deterioration, and the vesicles, so far as reported, were well formed and normal throughout. Only one instance of loss of lymph occurred, and that was purely accidental, owing to the sickness of the Assistant. Small-pox was prevalent in April in the Myhee Kanta, and in the same month the epidemic was also reported at Kakrej and Santulpoor, in the Palhunpoor States, but these are the only instances. Not a single case of inoculation was brought to notice, and no obstructions appear to have been met with by the Vaccinators, except in the presence of measles, which prevailed throughout the various districts from March to August; cholera also being present from April to July. The Superintendent was absent on his tour from January to June, passing the greater part of the time, as it appears, in the Myhee Kanta and Palhunpoor."

EASTERN GUZERAT.

Rewa Kanta and Rajpeepla.

Under the Superintendent Eastern Division.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	4,774	....	1,072	3,672	76·9
1860....	5,596	822	....	4,535	81·0

Dr. Ross, the Superintendent, states that, owing "to ill-health, he was unable to visit the Native States. The Vaccinators in these States are very idle, some of them incorrigibly so; but as they are appointed to, retain, or lose their situations without reference to the Superintendent, they can completely ignore his authority. The record of operations is, therefore, highly unsatisfactory."

KUTCH.

Years.	Total. Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	161	....	516	138	85·7
1860....	104	....	57	98	94·2

Report by Mr. SUDASEW HEMRAJ.

VACCINATION is decreasing in Kutch year after year. During the last year there have been 104 Vaccinations performed throughout the whole province of Kutch and city of Bhooj. These numbers, compared with those of the preceding year, show a decrease of 57. This cannot be ascribed to anything but prejudice and apathy on the part of the people. I think Vaccination cannot be practised in Kutch unless it is made lawful and compulsory on the people.

PEINT (NASSICK).

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	428	98	....	313	73·1
1860....	590	162	....	453	76·7

No Report.

VACCINATION UNDER CIVIL SURGEONS.

TANNAH.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon J. MENNIE (Acting).

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	235	....	101	204	86·8
1860....	221	....	14	207	93·6

THE vaccine lymph throughout the year has been healthy, and has never failed; but only 221 children have been vaccinated, 207 of which number were successful, 13 unsuccessful, and 1 doubtful; this ill-success is attributable to the great antipathy manifested by all classes of the natives of this town to the operation of Vaccination.

POONA.

One Vaccinator under the Civil Surgeon.— Surgeon G. G. W. MAITLAND.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	1,460	224	....	1,228	84·1
1860....	1,889	429	....	1,540	81·5

THE total number vaccinated during the past year has been 1,889, of about 29 per cent. more than the number vaccinated during the year 1859. This large increase is, in my opinion, attributed to the efficient and industrious manner in which the Assistant Vaccinator has carried on his duties. The percentage of successful vaccination is by no means small, although it is slightly less than that of the preceding year, 1859. Of the total number vaccinated, 1,212 were males, and 677 females: the number of children vaccinated under one year of age, 547. The

condition of the lymph has been excellent throughout the year, and a good supply of it has been supplied to out-stations whenever required. Small-pox was not prevalent in an epidemic form in the city and its neighbourhood. The large increase in the number of persons annually vaccinated shows that the good effects of Vaccination are being more appreciated by the people. Inoculation appears never to have been practised in the city of Poona.

AHMEDNUGGUR.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon J. G. FRASER, M.D.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	986	....	363	855	86·7
1860....	932	....	54	703	75·4

THE total number of Vaccinations for the past year, 1860, is considerably less than for the three years 1857-58-59 immediately preceding, but is greater than for all the other years on record prior to 1857. The percentage of success for the year 1860 is only 75·4, which is much less than for any previous year on record, except 1852-53, when the percentage of success was only 59·7; but notwithstanding this apparent falling off in the total number of vaccinations and in the ratio of success, I have reason to believe that the Returns of 1860 are fully more correct than those of any previous years, from the greater care and accuracy which has been taken in selecting and separating the successful Vaccinations from the others. From the above table it appears that, out of a total of 932 Vaccinations, there were 605 males, and 327 females; that 424 were children under one year of age, and 508 were adults and children above one year of age; that 703 were successful, and 229 were either unsuccessful or doubtful; that there were 850 Hindoos, 77 Mussulmans, 2 Parsees, and 3 Christians. The lymph has always appeared to be good, and to produce a healthy well-developed vesicle when the operation is properly and effectually performed. The moist weather during the monsoon does not appear so favorable for the success of the operation as the hot or dry season; perhaps the hot season is upon the whole the best. No case of Small-pox has come under my notice during the past year in any of the Hospitals or Dispensary Establishments under my charge, but one or two isolated cases of it have occurred in the city. Inoculation does not appear to be practised at Ahmednuggur: no case of it has ever come under my observation. It has not come within my observation to remark whether the inhabitants of the city manifest any greater anxiety or confidence to avail themselves of the benefits of Vaccination than in former years. The almost total absence of Small-pox for several years at Ahmednuggur is a sufficiently convincing proof, if any other were wanting, of the great benefit conferred on the population by the use of this most valuable prophylactic.

SATTARA.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon M. M. MACKENZIE.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	2,016	....	100	1,725	85·5
1860....	1,803	....	213	1,622	89·9

DURING the past year 1,803 Vaccinations have been performed, which, compared with that of the previous year, shows a decrease of 213. The percentage of successful Vaccinations has been 89·9. Of the 1,803 cases, 994 have been males, 809 females, 914 under one year, 889 above the age of one year. As to caste, 1,614 have been Hindoos, 141 Mussulmans, 22 Christians, 3 Parsees, and 23 other castes. From March up to the beginning of June the greater number of cases came under review, and although the decrease of operations has been considerable, yet, considering the fewer number of villages, than that of previous years, I consider the result on the whole as satisfactory. This decrease is reported by the Vaccinator to have arisen from one Assistant Vaccinator, under the Superintendent of Vaccination, having been put in charge of about 20 villages in the Talooka Korujgaum and Pettar Dewor, these being formerly under the care of the Vaccinator of the town of Sattara.

The lymph has usually been of a very good quality, and a sufficient stock is always in hand, and has been sent at various times to Mahableshwar, Kolapore, the 8th Regiment N. I., and Detachment H. M.'s 56th Regiment, quartered in Sattara.

SHOLAPORE.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon C. J. SYLVESTER, M.D.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	1,405	50	....	1,190	84·6
1860...	1,457	52	....	1,043	71·6

THE number vaccinated during the year has amounted to 1,457, of which 1,043 were successful, 281 unsuccessful, and 133 doubtful; the percentage of success being 71·6. A comparison

on the number of cases operated upon during the period under review, with that of the previous year, shows an increase of 52, but a deficiency of 47 in the total of successful cases, the ratio of success being also considerably less than observed during 1859, when it amounted to 84·6. The lymph employed during the year has been uniformly of good quality, and there has been no falling off in the supply: the results have been verified by myself, and the vesicles carefully inspected every week, with a view to the detection of any deterioration occurring in their appearance. The number of males vaccinated still preponderates over that of the females, though not in so large a proportion as has been observed in former years. Little difficulty is experienced in propagating the vaccine virus amongst the native population, the chief obstacle being the excessive apathy and indifference of the native character; though in some instances a dislike to the removal of the lymph from the children after Vaccination has been manifested by the parents, but on what ground I have not ascertained. The Assistant Vaccinator carries out Vaccination amongst the inhabitants of the town twice a week, when he is assisted by two peons detailed for that duty by the Police authority. The Assistant Vaccinator also vaccinates in camp under the superintendence of the medical officer in charge of Staff and details whenever his services are required for that purpose. Vaccination is practised in the jail, whenever any cases require the operation; the number of prisoners unprotected either by Small-pox or previous Vaccination is, however, very small, and the success in the operation much less than in those vaccinated outside the jail; many of the prisoners operated on, having probably suffered from variola, though exhibiting no marks of the disease. Every assistance has been afforded me by the Civil Authorities in the propagation of Vaccination, and the Assistant Vaccinator has been attentive to his duty.

DHOOLIA.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon R. W. James, M.D.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	633	....	279	601	94·9
1860....	899	266	....	847	94·2

The returns of the number of children vaccinated during the past year have been more favourable, as the number has exceeded the general average of the preceding five years. This is to be attributed to increased exertion on the part of the Assistant Vaccinator, as during the past twelve months Small-pox was by no means prevalent in the town, so that there was no compulsion from the fear of this disease, to induce parents to have their children guarded by the prophylactic. Out of 899 vaccinated, only 52 proved unsuccessful, giving a per-centage of 90·2, thus proving that, notwithstanding the length of time the virus has been in use, it is still effective. Supplies have been sent to Mundlaisir, Asseerghur and Malligaum, and the Civil Surgeon of Mundlaisir has written to me in the highest terms of the character of the

vaccine pustules, resulting from the application of the virus sent from this Station. I have still to complain of the want of that efficient support from the Civil Authority to the spread of Vaccination contemplated in the Government Notification No. 4., dated 12th January 1854, General Department.

NASSICK.

One Vaccinator under the Sub-Assistant Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	1,110	10	....	870	78·3
1860....	1,797	687	....	1,435	79·8

No Report.

AHMEDABAD.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon D. WYLLIE, M.D.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	2,620	....	437	2,454	93·7
1860....	2,647	27	....	2,478	93·6

THE above table, it will be remarked, shows a small increase in the operations for the past year, trifling it is true and of little significancy of itself, but still indicative of growing appreciations if viewed with the fact that the work of the Vaccinator was unusually impeded of the presence of measles in the city last summer; and regarded in this light, an increase, however small, is satisfactory. But after all, the number falls considerably short of the average for the previous five years. Indifference, and perhaps fancied security, begotten in the long absence of Small-pox from the neighbourhood will explain the decline; for, as formerly mentioned, the presence of epidemic never fails to swell largely the list of operations through the stimulus of fear. The entire number was vaccinated by the Vaccinator, the only subordinate detailed for this duty, and the patients in every case were residents of the city or its suburbs.

In respect of sex, males have usually predominated—there were 1,436 to 1,211 females, and these relative proportions are in close resemblance to the results of previous experience. As to age, a very large majority, that is 1,961, were under one year, against 686 over that age. As compared with the preceding year, these figures indicate a growing increase of operations among the infantile portion of the population,—all the more notable that prior to 1859 the bulk of the vaccinated were above one year. The results have been particularly satisfactory. Thus, of a total of 2,647 operations, 2,478 succeeded, while the number of failures was only 84, and of doubtful cases 85. The ratio of success is therefore equal to 93·6 per cent, that of the unsuccessful and doubtful cases being respectively 3·2. These results compare favorably with the past, which shows the average of success for the previous five years to be in proportion of 92·7 per cent. of those operated on. The lymph employed has continued of good quality throughout the year, and the resulting vesicles have been well formed and distinctive. On no occasion has it shown any tendency to deterioration, such has been remarked in the Deccan during the continuance of rain, and there has invariably been abundance available at all times to meet the wants of neighbouring medical officers, as well as to enable me to send supplies to Deesa, Aboo, Neemuch, and Khairwarrah. No case of Small-pox either in the city or suburbs has been reported, nor has a single instance of inoculation been brought to notice for many years past. There is no antagonism to contend against, nor anything like active opposition. Apathy or indifference, blended occasionally with a shade of distrust, appears to be the normal state of native feeling in reference to Vaccination, at least as regards the great bulk of this community, and time and progress will best provide a fitting remedy. The present system seems to work well, and I have no suggestions to offer. The Vaccinator is an old and excellent servant, possessing all the skill and local knowledge best calculated to insure his usefulness. He discharged his duties with kindly urbanity, and therefore in a way most likely to enlist confidence and secure good will. I have inspected the Vaccinator's work at least once weekly; and with the exception of some falling off during the prevalence of measles, a fair amount was done throughout the different months, and in a manner to meet my entire approval.

KAIRA.

One Vaccinator under the Civil Surgeon —Assistant Surgeon C. K. Colston.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	1,129	....	107	1,052	93·1
1860....	110	....	1,019	103	93 6

The reason of the decrease in the number of Vaccinations performed was owing to the death of the Station Vaccinator, and his place not having been supplied for several months.

RAJCOTE.

One Vaccinator under the Civil Surgeon.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	1,409	624	....	1,253	88·9
1860....	966	....	443	848	87·7

No Report.

SURAT.

One Vaccinator under the Civil Surgeon.—Surgeon M. PELLY (Acting).

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	1,298	....	245	1,084	83·5
1860....	1,382	84	....	1,187	85·8

FROM the accompanying return it will be seen that there have been 1,382 people vaccinated —an increase of 84 in the number operated on during the year 1860 over that of 1859, and a decrease of 14 as regards the average of the preceding five years. This result is more favorable than that recorded for 1859, when the total for the year was less by 245 than that of the preceding year, and fell 77 below the average for five years. No particular reason can be assigned for the differences observed. The numbers vaccinated, classed according to sex, very nearly equal each other, there being only a difference of 14 in favor of males. The number operated on under the age of one year has been unusually large, being 54 over that of those vaccinated above the age of one year. The numbers in each of the five preceding years having been in the reverse proportion, that is to say, those above have always exceeded those under one year. The number of successful cases was 85·8 per cent. of the total vaccinated, ordinary average.

My opportunities of observing the state of the lymph have been very limited, but since I assumed charge of the Department it has appeared to be very good. I have not heard of any cases of Small-pox having occurred lately in the town, nor does there appear to be any reason to think that inoculation is practised there. There are no obstructions to the spread of Vaccination that I am aware of beyond the ordinary apathy and prejudices of the natives. The Civil Authorities appear to give every aid in their power, and I can suggest no plan whereby the spread of Vaccination in Surat is likely to be furthered.

BROACH.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon J. GLEN.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully. Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	1,561	25	....	1,303	83·4
1860....	1,904	343	....	1,553	81·5

IN making a comparison between the years 1859 and 1860, it will be found that the number of individuals vaccinated will be higher in the year 1860 than in the one preceding it. The difference in favor of 1860 being 343, the total number vaccinated amounts to 1,904; of these 1,208 were males, and 696 females; 1,027 of the total number were children under one year, and above that age 877. The successful cases amounted to 1,553, the unsuccessful cases 172, and doubtful 179. The cause of this increase is to be ascribed to the greater willinguess of the towns-people to submit their children for Vaccination; Hindoos as usual make up the larger portion of the number, these amounting to 1,209, whilst the Mussulmans again number something more than half of the Hindoos, Parsees return but a very small modicum, the children vaccinated amongst them during the year numbering 18 only. Inoculation is not practised in this town or its vicinity so far as I am aware. The lymph continues very good; but the difficulty of inducing the parents to return with their children after receiving the vaccine matter is still very great. They have an insuperable objection to permit the virus to be conveyed from their own child to the offspring of another. The zeal and assiduity of the Vaccinator remain undiminished, and his intelligence and kind disposition prevail where, perhaps, many might fail.

BELGAUM.

One Vaccinator under the Civil Surgeon.—Surgeon Major T. WALLER.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	478	....	165	435	91·0
1860....	449	....	29	411	91·5

FOUR hundred and forty-nine subjects have been vaccinated during the past year, a decrease of 29, as compared with the total number of Vaccinations for the previous year; of these

411 were successful, being a percentage of 91·5 on the whole number. Besides the above, 27 persons have been vaccinated in the Sudder Bazar, all of which have been successful. The decrease noticed in the return has been caused partly by the sickness of the Vaccinator and the scarcity of subjects.

DHARWAR.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon J. MILLS. (Acting.)

Years.	Total. Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	1,222	197	....	1,090	89·1
1860....	1,052	....	170	933	88·6

THE past year shows a decrease of 170 from the previous year. This is to be attributed chiefly to the ill health of the Vaccinator, who suffered more or less during the latter half of the year from guinea-worm, at times very severely. His own want of zeal has also in some degree contributed to the decrease. The people continue to accept Vaccination when brought to their doors, but show no inclination to seek it. The percentage of success has been very slightly below that of last year. The lymph and vesicles have been on the whole good, but the former has once or twice had to be renewed from a neighbouring Vaccinator. In consequence of the difficulty of inducing the people to bring their children together in one place, it is not practicable to carry on Vaccination in the town, under my own immediate observation, or to fully examine into the correctness of the Vaccinator's return.

KOLAPORE.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon C. G. WIEHE, M.D.

Years	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	2,036	....	918	1,864	91·5
1860....	3,017	981	....	2,801	92·8

THE Vaccinations performed by the station Vaccinator in the city and neighbouring villages of Kolapore have been both numerically and in point of success very satisfactory during the past year. Exclusive of Vaccinations in Camp and Cantonment Bazars which are not reported here, 3,017 have been vaccinated: this is an increase of 981 as compared with the preceding year, namely 1859. This result may be attributed to the absence of obstructive causes as cholera and small-pox; the latter does not seem to have prevailed at all, and the former only to a comparatively inconsiderable extent. The percentage of successful cases gives 92·8 as the result, being an increase of one per cent. over the operations of the preceding year, 3·7 over those of 1858, and 4·7 over those of 1857—a progressive ratio of success which must tend to give increased assurance and confidence to the native mind. The number of children vaccinated under one year forms much too small a proportion to the whole, being less than one fourth, much as it is to be desired that the period of protection should date as early as possible; it is however scarcely possible that in district vaccinations much attention to this point can be expected; but it is otherwise in towns where births are registered. During the past year 448 births were registered in the town of Kolapore; of these 247 were male and 201 female children: the total Vaccinations in the town amounted to 430; this number is included in the total Vaccinations for the year. Of low-caste children, such as Mhar, Mhang, Chambhar, &c., 285 children were vaccinated; 263 of these successfully, 92·3 was the percentage of success among these. On a reference to the Maratha registers it would appear that the amount of success in all the different castes is as nearly as possible equally balanced.

RUTNAGHERRY.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon E. N. C. DECRESPIGNY, M.D.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	961	374	....	873	90·8
1860....	544	....	417	472	86·7

I REGRET to have to report a considerable falling off in the number of children operated on last year, as compared with the returns of the last two or three years. The cause of this decrease is, that Vaccination was not carried on since the opening of the season in the neighbouring villages as was heretofore the custom. I had the misfortune to lose from death by cholera my Assistant Vaccinator, who was a very zealous man and experienced in the ways of obtaining subjects for operation. His successor being a new hand, is at present unacquainted with the localities. The lymph had continued good in quality till October, when it became deteriorated, and some delay was experienced in obtaining a fresh supply from the district Vaccinators.

KURRACHEE.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon J. BEAN.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	1,014	245	....	933	92·0
1860 ...	1,100	86	....	1,007	91·5

DURING the past year Vaccination has been performed in 1,100 cases, and in 1,007 cases with complete success, while 61 were of a doubtful character; thus showing an increase of more than 70 successful cases as compared with the preceding year; this increase will be observable among all castes except the Mussulman, in which the number falls considerably short; a deficiency for which I cannot satisfactorily account. Difficulty continues to be experienced in procuring children for the operation, and scarcely any are brought willingly for that purpose. The lymph has been of good quality, and kept up throughout the year, the Vaccinations having been usually performed twice a week, and the Vaccinator has been kept up to his work as much as possible; there has, nevertheless, been much reason to complain at times of remissness in the performance of his duty. Small-pox appeared in the early part of the year, and continued slightly till April. A very few cases occurred in the town, and its prevalence was chiefly confined to the families of the Police corps.

HYDRABAD.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon J. G. ASHER, M.D. (Acting.)

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	1,533	300	....	1,195	77·9
1860....	1,577	44	....	1,129	71·5

THE statistical return of Vaccination is not to be depended on. In 233 cases the result is not known. In the total are included 99 cases of re-vaccination: 952 of those vaccinated were under one year of age. The quality of lymph and vesicles was good. A few cases of Small-pox have occurred during the year, but no epidemic. The people of the district do not appreciate the benefit of Vaccination, and merely give an unwilling consent, as it is conducted under official authority.

SHIKARPOOR.

One Vaccinator under the Civil Surgeon.—Assistant Surgeon A. E. RIDDELL.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	1,417	206	....	1,416	99·9
1860 ...	1,423	6	....	1,421	99·8

DURING the year 1860, 1,423 children were vaccinated, being an increase on the former year of 6. This very slight difference is, as far as I can ascertain, due to the fact that every child among the middle and lower classes is vaccinated. Of this number 759 were male children and 664 females; 611 were children of Hindoos, 807 of Mussulmans, 2 only Christians, and 3 of other castes. Out of this total only 2 unsuccessful cases were observed. The character of the lymph is good and clear, and the vesicles attained from its use are every thing which could be desired. I have not had a single case of Small-pox reported to me. No prejudice on the part of the natives appears to exist against Vaccination, on the contrary, they seem to value it, as a preventive against Small-pox. I have frequently had applications for supplies of lymph from Jacobabad and elsewhere, and the reports on it have been favorable.

ADEN.

One Vaccinator under the Civil Surgeon.—Assist. Surgeon J. F. STEINHAEUSER.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1859....	853	....	....	639	74·9
1860....	1,150	297	....	528	45·9

NOT having superintended the Vaccination at the station until the last month of the official year, it is only within my power to offer such remarks as are obvious to me from an inspection of the Returns and the few short notes appended to the Monthly Reports by my predecessor. The official year commences with a blank return and the remark that that there is no lymph at the station, consequently no Vaccination. This circumstance may easily take place at Aden, more especially during the hot months, when the virus is very apt to deteriorate; but is much less likely to happen in the cold weather. In fact, Vaccination might effectually cease at Aden were a supply of fresh lymph not annually sent by the Royal Jennerian Institution in London. Although it does not always prove efficient, yet it has frequently during this year enabled the Superintendent to keep up Vaccination. Fresh lymph, however, can always be obtained within a month from Bombay.

In February the vaccine matter obtained from Bombay appears not to have been very reliable, as it produced, according to a note appended to the Report for that month, the typical vesicles in Europeans, but was too highly successful with Natives, showing a tendency to degenerate. Late in March the virus forwarded by the Royal Jennerian Institution in London proved efficient, producing vesicles with the true characteristics, and this continued to act satisfactorily until July, when it is remarked that the lymph again began to deteriorate. In August a fresh supply arriving from London, typical vesicles were the result of all the operations, and this favourable report continue to the closing of the year.

The total number of operations performed during the year has been 1,150, giving a large increase above those of the year 1859. I attribute this favorable result in a great measure to the countenance given to Vaccination by the Civil Authorities. Natives are naturally quick in divining the wishes of those placed in authority over them; but the association of a Police peon with the Native Vaccinator is, though perfectly ligitimate, a broad and significant hint not easily to be misunderstood. The proportion of male children who have undergone the operation compared with females is very remarkable, the former being more than double the number of the latter. The number of children vaccinated under one year of age, as compared with those above one year of age (respectively 85 and 1,065), is yet more striking. It is difficult to arrive at any satisfactory explanation of this fact, unless it be in some degree accounted for by the statement, that by far the chief number of operations have taken place among Arabs and Somalis, the latter (in this Report classed with Mussulmans) a fluctuating population; both readily subject their grown up children to the experiment, but are more solicitous about their infants, dreading the febrile excitement with which the operation is attended. The large proportion of unsuccessful and doubtful to the successful cases which stands recorded as far below one-half of the total number vaccinated, evinces a nervous caution in entering successful cases amounting almost to timidity. To expect to see patients after the fourteenth day is to expect what will rarely take place. They are willing enough to show the progress of the pustule up to the tenth day, but when a scale commences to form, they consider themselves well, and are not to be persuaded to appear before the Vaccinator. The legislature in England sanctions the granting of a certificate of protection by a legalized Vaccinator on the tenth day, provided the pustule shows the proper characteristic of incipient desication. The Vaccine Institutions uphold that protection can only be warranted on an inspection of the scabs on the fourteenth day. Not to enter into this controversy, although I incline to the latter opinion, yet it appears to me that a Superintendent of Vaccination is perfectly justified in returning a case as successful if he has satisfied himself that the pustule has gone through its normal course up to the tenth day (when the lymph is known to be producing characteristic pustules), although he may not have the opportunity of examining the scabs. It becomes the duty of the Vaccinator, with a mixed and fluctuating population like that of Aden, to make the operations, and after attendance on himself for observations, as easy as possible to the people, or Vaccination would soon become unpopular. It is gratifying to find the Jews (classed under "all other castes") again having recourse to the operations; although the number is but small, yet it is a beginning, which may bear a good result in convincing this perverse, and by no means inconsiderable, proportion of the population of the efficacy of this prophylactic remedy against Small-pox. The Christians being but few in number, excepting in the Camp where the European troops are stationed, show necessarily but a very limited number of cases. The Hindoos, considering their prejudices, have afforded a fair proportion of cases. Fewer Small-pox patients have been under treatment during the year 1860 than in previous years, but the station can never be free from the disease as fresh importations from Africa and Arabia may always with certainty be expected.

APPENDIX.

TABLE

VACCINATION UNDER

Table of Divisional Vaccination, showing the Number and Names of the Divisions, and their
and compared with those of last Year ; the Total Number arranged according to Sex, Caste,
Operations performed by each Vac

Number.	Divisions.	Names of the Medical Officers, Superintendents of Vaccination.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.		
					1859.	Increase.	Decrease.
1	Presidency	Sub-Assistant Surgeon Anunta Chundroba.	3	8,027	7,999	28	..
2	Concan	Assistant Surgeon T. B. Beatty	18	45,773	39,669	6,104	..
3	Northern Deccan	,, F. H. Plumptre.....	18	21,700	20,013	1,687	..
4	Southern Deccan	,, W. Peach	18	13,213	13,318	..	105
5	Western Guzerat....	,, R. T. Thorp	15	22,020	20,802	1,218	..
6	Eastern Guzerat	,, C. Ross	17	20,574	21,871	..	1,297
7	Sind	,, T. E. P. Martin.....	15	59,568	49,525	10,043	..
8	Kattywar	,, R. G. Lord.....	8	4,257	4,744	..	487
		Total..	112	195,132	177,941	17,191	..

No. 1.

SUPERINTENDENTS.

Superintendents; the Number of Vaccinators employed; the Total Vaccinations performed, Age, and Result; the Ratio of Successful to Total Vaccinated; and the Average Number of cinator, for the Year 1860.

Total Number Vaccinated, arranged according to—												Ratio per Cent. of Successful to Number Vaccinated.	Average Number of Persons Vaccinated by each Vaccinator.
Sex.		Caste.					Age.		Result.				
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful	Doubtful.		
4,458	3,569	5,879	1,141	661	307	39	3,502	4,525	6,760	682	585	84.2	2,675
23,294	22,479	44,110	1,494	37	2	130	6,683	39,090	43,178	1,344	1,251	94·3	2,543
11,492	10,208	19,156	882	23	2	1,687	2,457	19,243	20,478	586	636	94·3	1,205
7,183	6,030	11,602	1,258	57	..	296	4,046	9,167	12,055	652	506	91·2	734
11,378	10,642	18,831	1,543	5	..	1,641	15,782	6,238	20,068	1,178	774	91·1	1,468
11,424	9,150	17,506	2,521	4	12	531	7,421	13,153	17,479	2,185	910	84·9	1,210
34,242	25,326	8,495	48,438	2	1	2,632	15,937	43,631	58,939	404	225	98·9	3,971
2,248	2,009	3,779	452	..	..	26	2,445	1,812	3,976	131	150	93·4	532
	89,413	129,358	57,729	789	324	6,932	58,273	136,859	182,933	7,162	5,037	93·7	1,742

TABLE

VACCINATION UNDER

Table of Vaccination under Civil Surgeons and others, arranged according

No.	Divisions of Deputy Inspector General of Hospitals.	Civil Stations.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.			Sex.	
					1859.	Increase.	Decrease.	Males.	Females.
1	Presidency	Tanna	1	221	235	..	14	133	88
		Alibaugh	..	282	99	183	..	153	129
		Bandora	..	60	49	11	..	37	23
		Coorla	..	22	20	2	..	14	8
		Total..	1	585	403	182	..	337	248
2	Poona	Poona	1	1,889	1,460	429	..	1,212	677
		Ahmednuggur	1	932	986	..	54	605	327
		Sattara	1	1,803	2,016	..	213	994	809
		Sholapore	1	1,457	1,405	52	..	833	624
		Dhoolia	1	899	633	266	..	466	433
		Nassick	1	1,797	1,110	687	..	968	829
		Mahableshwur	..	84	148	..	64	43	41
		Total..	6	8,861	7,758	1,103	..	5,121	3,740
3	Northern	Ahmedabad	1	2,647	2,620	27	..	1,436	1,211
		Kaira	1	110	1,129	..	1,019	69	41
		Rajkote	1	966	1,409	..	443	493	473
		Surat	1	1,382	1,298	84	..	698	684
		Broach	1	1,994	1,561	343	..	1,208	696
		Total..	5	7,009	8,017	..	1,008	3,904	3,105
4	Southern	Belgaum	1	449	478	..	29	270	179
		Dharwar	1	1,052	1,222	..	170	563	489
		Kolapore	1	3,017	2,036	981	..	1,556	1,461
		Rutnagherry	1	544	961	..	417	286	258
		Vingorla	..	19	89	..	70	13	6
		Total..	4	5,081	4,786	295	..	2,688	2,393
5	Sind	Kurrachee	1	1,100	1,014	86	..	598	502
		Hydrabad	1	1,577	1,533	44	..	832	745
		Shikarpore	1	1,423	1,417	6	..	759	664
		Jail, Civil, Police, and Dispensary Hospitals	..	1,063	1,545	..	482	769	294
		Total..	3	5,163	5,509	..	346	2,958	2,205
6	Aden	Aden	1	1,150	853	297	..	798	352
7	Persian Gulf	Bushire	..	559	225	334	..	336	223
		Grand Total..	20	28,408	27,551	857	..	16,142	12,266

No. 2.

Civil Surgeons and others.

to Divisions, and showing the Details, as in Table No. 1, for the year 1860.

Total Number Vaccinated, arranged according to—											
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of persons Vaccinated by each Vaccinator.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful.	Doubtful.		
158	13	41	7	2	93	128	207	13	1	93·6	221
263	6	1	..	12	82	200	231	28	23	81·9	....
14	5	33	8	....	20	40	50	3	7	83·3	....
6	..	14	2	....	1	21	16	4	2	72·7	....
441	24	89	17	14	196	389	504	48	33	86·1	221
1,487	364	37	1	....	547	1,342	1,540	138	211	81·5	1,889
850	77	3	2	....	424	508	703	149	80	75·4	932
,614	141	22	3	23	914	889	1,622	105	76	89·9	1,803
,030	310	2	5	110	692	765	1,043	281	133	71·6	1,457
609	116	2	..	172	684	215	847	2	50	94·2	899
1,339	105	8	1	344	991	806	1,435	14	348	79·8	1,797
71	2	11	..	....	14	70	57	14	13	67·8	....
7,000	1,115	85	12	649	4,266	4,595	7,247	703	911	81·7	1,463
2,201	438	3	5	....	1,961	686	2,478	84	85	93·6	2,647
42	19	2	..	47	49	61	103	6	1	93·6	110
705	198	..	6	57	550	416	848	51	67	87·7	966
1,065	201	6	25	85	718	664	1,187	156	39	85·8	1,382
1,209	675	2	18	....	1,027	877	1,553	172	179	81·5	1,904
5,222	1,531	13	54	189	4,305	2,704	6,169	469	371	88·0	1,402
280	162	7	..	....	213	236	411	38	....	91·5	449
829	211	11	1	....	263	789	933	105	14	88·6	1,052
2,970	45	2	..	....	588	2,429	2,801	80	136	92·8	3,017
463	80	1	..	....	66	478	472	44	28	86·7	544
16	2	1	..	....	5	14	13	6	....	68·4	....
4,558	500	22	1	....	1,135	3,946	4,630	273	178	91·1	1,265
324	390	70	40	276	683	417	1,007	32	61	91·5	1,100
984	583	6	4	....	952	625	1,129	215	233	71·5	1,577
611	807	2	..	3	133	1,290	1,421	2	....	99·8	1,423
229	813	..	..	21	336	727	976	77	10	91·8	....
2,148	2,593	78	44	300	2,104	3,059	4,533	326	304	87·7	1,367
91	997	25	..	37	85	1,065	528	404	218	45·9	1,150
..	537	4	..	18	212	347	559	....	....	100·0	....
19,460	7,297	316	128	1,207	12,303	16,105	24,170	2,223	2,015	85·1	1,316

TABLE

VACCINATION UNDER

Table of Vaccination through the Agency of the Native Chiefs, arranged according for the

Number.	Divisions.	Stations.	Medical Officers.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.		
						1859.	Increase.	Decrease.
1	SOUTHERN DECCAN..	Kolapore, &c .	Asst. Surg. W. Peach	17	9,351	9,900	..	549
2	WESTERN GUZERAT..	Mahee Kanta ..	,, D. Wyllie	10	17,292	14,511	2,781	....
3	EASTERN GUZERAT ..	Rewa Kanta....	,, S. M. Pelly ..	12	5,596	4,774	822	....
4	NORTHERN DECCAN..	Peint (Nassick)..	Sub-Asst.Surg. R. Spencer.	1	590	428	162	....
5	KONKAN	Sawunt Warree..	Asst. Surg. J. Mennie	1	4,585	4,135	450	....
6	KATTYWAR	Rajcote, &c....	,, R. G. Lord....	19	13,234	13,359	..	125
7	NORTHERN DIVISION.	Bhooj.....	Mr. Sudashew Hemraj, G. M. College.	4	104	161	..	57
8	SOUTHERN DECCAN..	Hooblie.....	Sub-Asst. Surg. Bhiccajee Amroot.	1	141	..	141	....
			Total..	65	50,893	47,268	3,625	....

No. 3.

Native Chiefs' Agency.

to the Divisions of Vaccination, and showing Details, as in Tables Nos. 1 *and* 2, *Year* 1860.

Total Number Vaccinated, arranged according to—													
Sex.		Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of persons Vaccinated by each Vaccinator.
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful	Doubtful.		
5,037	4,314	8,401	541	11	..	398	2,641	6,710	8,654	415	282	92·5	1,017
8,735	8,557	14,715	1,139	..	..	1,438	7,578	9,714	14,753	1,525	1,014	85·3	1,729
2,797	2,799	4,886	470	4	2	234	1,650	3,946	4,535	439	622	81·0	466
288	302	588	2	..	..	....	143	447	453	56	81	76·7	590
2,413	2,172	4,434	92	57	1	1	799	3,786	3,837	347	401	83·6	4,585
7,205	6,029	10,971	2,254	..	..	9	5,505	7,729	11,897	809	528	89·8	696
58	46	80	22	1	2	....	18	86	98	2	4	94·2	26
65	76	101	32	..	..	7	34	107	107	19	15	75·8	141
26,598	24,295	44,176	4,552	73	5	2,087	18,368	32,525	44,334	3,612	2,947	87·1	783

TABLE

General Abstract of Vaccination

Designation of Tables.	Total Number Vaccinated.	Compared with last Year.			Sex.	
		1859.	Increase.	Decrease.	Males.	Females.
No. 1, Vaccination under Superintendents	195,132	177,941	17,191	....	105,719	89,413
No. 2, Ditto under Civil Surgeons, &c.	28,408	27,551	857	....	16,142	12,266
No. 3, Ditto by the Native Chiefs' Agency.....	50,893	47,268	3,625	....	26,598	24,295
Total..	274,433	252,760	21,673	....	148,459	125,974

No. 4

FOR THE YEAR 1860.

Total Number Vaccinated, arranged according to—										
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful.	Doubtful.	
129,358	57,729	789	324	6,932	58,273	136,859	182,933	7,162	5,037	93·7
19,460	7,297	316	128	1,207	12,303	16,105	24,170	2,223	2,015	85·1
44,176	4,552	73	5	2,087	18,368	32,525	44,334	3,612	2,947	87·1
192,994	69,578	1,178	457	10,226	88,944	185,489	251,437	12,997	9,999	91.6

TABLE

SMALL-

Table showing the Admissions and Deaths from Small-pox amongst European and Native Troops, with the Percentage of Deaths to Strength

Divisions.	European Troops.									Native Troops.									Prisoners in						
	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to Strength.	Percentage of Deaths to Treated.	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Percentage of Deaths to Strength.	Percentage of Deaths to Treated.	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.
Presidency Division	1,037	..	4	4	4	..	..	..	..	4,667	..	2	2	1	..	1	..	..	1,006	..	..	..	..	..	..
Poona „	4,490	1	20	21	20	1	..	0·02	4·7	9,419	1	24	25	24	1	..	0·01	4·0	1,503	..	..	..	..	..	..
Northern „	1,886	..	..	..	..	..	..	..	..	5,980	2	12	14	8	..	6	..	..	840	..	..	..	..	..	..
Southern Mahratta Circle	1,669	..	..	..	..	..	..	..	..	5,116	..	..	..	..	..	..	..	..	788	..	..	..	..	..	..
Sind Division.....	2,627	1	..	1	1	..	..	..	..	5,852	..	2	2	1	..	1	..	..	1,720	..	1	1	1	..	..
Malwa „	4,229	3	13	16	13	3	..	0·07	18·7	5,390	1	11	12	11	1	..	0·02	8·3	..	..	..	..	..	..	..
Aden „	454	..	..	..	..	..	..	..	..	1,218	..	..	..	..	..	..	..	..	172	..	..	..	..	..	..
Total..	16,392	5	37	42	38	4	..	0·02	9·5	37,642	4	51	55	45	2	8	0·005	3·6	6,029	..	1	1	1	..	..

No. 5

Pox.

Prisoners in Jails, Civil Hospitals, and Dispensaries, in each Division of the Bombay Presidency, and to Treated, for the year 1860.

Jails.		Civil Hospitals.									Dispensaries.								
Percentage of Deaths to									Percentage of Deaths to								Percentage of Deaths to	
Strength.	Treated.	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Strength.	Treated.	Strength.	Remained.	Admitted.	Total.	Discharged.	Died.	Remaining.	Strength.	Treated.
....	....	Unknown and variable.	..	16	16	8	4	4	..	25·0	Unknown and variable.	..	4	4	4	..	..	..	..
....	....		..	2	2	1	1	..	..	50·0		..	..	..	..	..	..	..	..
....	....		..	1	1	1	..	..	..	..		..	..	..	..	..	..	..	..
....	....		..	1	1	1	..	..	..	..		..	..	..	..	..	..	..	..
....	....		..	2	2	2	..	..	..	..		..	2	2	2	..	..	..	..
....	....		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..
....	....		2	31	33	17	10	6	..	..		..	..	..	..	..	..	..	..
....	....		2	53	55	30	15	10	..	30·3		..	6	6	6	..	..	..	..

TABLE OF AGES.

Vaccination in 1860, *arranged according to Ages, whether performed under or above One Year of Age.*

	Establishments, &c.	Age.		Difference.		Total Vaccinated.
		Under one Year.	Above one Year.	Under.	Above.	
I.	Superintendents	58,273	136,859	....	78,586	195,132
II.	Civil Surgeons and others	12,303	16,105	....	3,802	28,408
III.	Native Chiefs' Agency	18,368	32,525	....	14,157	50,893
	Total..	88,944	185,489	....	96,545	274,433
I.—*Superintendents.*						
	Presidency Division	3,502	4,525	....	1,023	8,027
	Concan ,,	6,683	39,090	....	32,407	45,773
	Northern Deccan ,,	2,457	19,243	....	16,786	21,700
	Southern ,, ,,	4,446	9,167	....	5,121	13,218
	Western Guzerat ,,	15,782	6,238	9,544	....	22,020
	Eastern ,, ,,	7,421	13,153	....	5,732	20,574
	Sind ,,	15,937	43,631	....	27,694	59,568
	Kattywar ,,	2,445	1,812	633	....	4,257
II.—*Civil Surgeons and others.*						
	Tanna	93	128	....	35	221
	Alibaugh	82	200	....	118	282
	Bandora	20	40	....	20	60
	Coorla	1	21	....	20	22
	Poona	547	1,342	....	795	1,889
	Ahmednuggur	424	508	....	84	932
	Sattara	914	889	25	....	1,803
	Sholapore	692	765	....	63	1,457
	Dhoolia	684	215	469	....	899
	Nassick	991	806	185	....	1,797
	Mahableshwar	14	70	....	56	84
	Ahmedabad	1,961	686	1,275	....	2,647
	Kaira	49	61	....	12	110
	Rajcote	550	416	134	....	966
	Surat	718	664	54	....	1,382
	Broach	1,027	877	150	....	1,904
	Belgaum	213	236	....	23	449
	Dharwar	263	789	....	526	1,052
	Kolapore	588	2,429	....	1,841	3,017
	Rutnagherry	66	478	....	412	544
	Vingorla	5	14	....	9	19
	Kurrachee	683	417	266	....	1,100
	Hydrabad	952	625	327	....	1,577
	Shikarpore	133	1,290	....	1,157	1,423
	Sind Jail, Civil, Police, and Dispensary Hospitals	336	727	....	391	1,063
	Aden	85	1,065	....	980	1,150
	Bushire	212	347	....	135	559
III.—*Native Chiefs' Agency.*						
	Kolapore, &c.	2,641	6,710	....	4,069	9,351
	Mahee Kanta	7,578	9,714	....	2,136	17,292
	Rewa Kanta	1,650	3,946	....	2,296	5,596
	Peint (Nassick)	143	447	....	304	590
	Sawunt Warree	799	3,786	....	2,987	4,585
	Rajcote	5,505	7,729	....	2,224	13,234
	Bhooj	18	86	....	68	104
	Hooblee	34	107	....	73	141

GENERAL DEPARTMENT.

GOVERNMENT RESOLUTION No. 221, 7TH FEBRUARY 1862.

With respect to the increase which is exhibited in this Report, as also to the decrease in the ratio of "doubtful" and "unsuccessful" cases, as compared with the previous year, the Governor in Council observes that the Principal Inspector-General qualifies his statement on these points by the remark (paragraph 2). "if the returns and reports represent an approximation to the truth." His Excellency in Council therefore fears, that, taking this passage in connection with paragraph 12 of the Principal Inspector-General's letter, there is reason to believe that the results of the year's operations, which are shown by the Superintendents in their Reports, cannot be depended upon.

2. The question of admitting Vaccinators to the benefits of the Pension Rules is one of considerable importance to the efficient working of the Department, and should be brought to the notice of the Government of India, in order that the system on which this important sanitary measure is regulated may be uniform throughout British India.

3. His Excellency in Council is gratified to find that the Principal Inspector-General is able to speak in high terms of the zeal and attention to their duties which the several Superintendents have shown, and in particular Assistant Surgeon Plumptre and Drs. Peach and Martin.

(Signed) J. B. PEILE,
Acting Under-Secretary to Government.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR THE YEAR 1861.

Bombay:
PRINTED FOR GOVERNMENT
AT THE
EDUCATION SOCIETY'S PRESS, BYCULLA.

1862.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR 1861.

No. 712 OF 1862.

From the PRINCIPAL INSPECTOR GENERAL, Medical Department,

To the SECRETARY to GOVERNMENT, General Department.

SIR,—Agreeably to the instructions contained in your letter No. 1366 of the 28th September 1861, I have the honour to forward extracts from the Reports of Superintendents of Vaccination for the past year (1861), with the results duly tabulated in the manner followed upon former occasions.

2. It will be observed, however, that the Reports and Returns are submitted to Government in manuscript, as it would be impossible to have them printed and published within the prescribed period (1st May). It will rest with His Excellency the Governor in Council to determine whether or not copies, as before, shall be printed for circulation in this country, and for transmission to the Home Authorities.

3. Viewing the total results of Vaccination for the year 1861, it may be said—as far as mere numbers are concerned,—that there has been a considerable falling off, to the extent indeed of about 14,000 vaccinations, as will appear by reference to Table No. 4 at the end. The decrease, however, will be observed to have taken place chiefly under Superintendents, and to about 21,000, whilst by the Native Chiefs' agency there was an increase of about 7,000, reducing the total decrement, as before stated, to about 14,000; that is, there were about 260,000 vaccinations performed in the Bombay Presidency in the year 1861, compared to about 274,000 operations in the previous year 1860. Of the total number vaccinated, the average of successful instances amounted to about 91·5 per cent.; that is to say, out of every 100 cases

reported to have been operated on, 8·5 per cent. have been discarded for want of a verified successful result, which appears to be about the average rate of failures in this Presidency for a number of years, and is less, perhaps, than in many parts of England.

4. By reference to Table No. 1, the decrease in the vaccinations performed by Superintendents can be traced as occurring chiefly in the "*Southern Circle*" and in *Sind*. There is no explanation offered of the cause of decrease in the former Circle, whilst that of the latter is doubtless correctly ascribed by the Superintendent to sickness and to changes in the Establishment. A decrease is also observed of about 2,000 vaccinations in the "*Central Circle*," and of about 1,000 in the "*Northern Circle*." Indeed, considering the changes all the Divisions have undergone during the past year, a larger amount of decrease might have been anticipated. It is satisfactory therefore to turn to the Presidency Circle, where there has been an increase of about 800, especially as, under the recent Report submitted to Government by my predecessor's letter No. 170 of the 27th January 1862, the whole of the operations reported as "*successful*" may be implicitly relied upon, which is evidenced also by the fact shown in the tables—that about 19 out of every 100 are discarded; or in other words, that the percentage of success is 10 less than the average of the whole Presidency. Again, in Kattywar there has been an increase of about 1,850 vaccinations.

5. The chief feature which marked the year 1861 was the reorganisation of the Vaccinating Establishment, as directed to be carried out by Government Resolution No. 2250 of the 20th November 1860. Under this measure two Divisions of Vaccination were absorbed, and two Superintendents placed at Army disposal. The Concan Division was allotted to the Central and Southern Circles pretty equally, and the Northern and Eastern Divisions of Gujarat were merged into the Northern Circle.

6. The establishments were also redistributed, and at the present time the Northern Circle has 32 Government Vaccinators, and 23 Vaccinators belonging to the Native Chiefs, or 55 individuals whose operations have to be inspected by the Superintendent. Again, the Central Circle has a staff of 30 Government Vaccinators. The Southern Circle has no less than 24 Government and 19 Native Chiefs' Vaccinators.

7. The scheme, as originally intended by Government to be carried out, was, that the superintendence of so large a number of Vaccinators, and scattered over so large a tract of country, should not devolve entirely upon the Superintendents, but that in each Circle assistance should be afforded by two Deputies, to be drawn from the ranks of Sub-Assistant Surgeons, and to be

located within a comparatively easy distance of the Vaccinators and Superintendent.

8. I produce the orders on the subject, and the Rules regarding the duties of Deputy Superintendents :—

"*Notification, General Department, 24th July* 1861.—The Honorable the Governor in Council is pleased to cancel the Rules under Article 2 Section VIII., Medical Code, and to direct that the Bombay Presidency, with the exception of the Island of Bombay, be divided into the following five Circles for the purposes of Vaccination :—

I.—The Northern Circle, to include the Collectorates of Ahmedabad, Kaira, Surat, and Broach.

II.—The Central Circle, to include the Collectorates of Tanna, Poona, Khandeish, and Ahmednuggur.

III.—The Southern Circle, to include the Collectorates of Rutnagherry, Sattara, Sholapore, Belgaum, and Dharwar.

IV.—The Kattywar Circle.
V.—The Sind Circle. } As at present.

"2. Each Circle will be under the superintendence of an Assistant Surgeon, upon the salaries at present pertaining to those appointments.

"3. Two Sub-Assistant Surgeons of the 2nd Class, and four Sub-Assistant Surgeons of the 3rd Class, will be appointed Deputy Superintendents, upon a consolidated salary of Rs. 200 and Rs. 150 respectively, agreeably to Article 12 of the Notification of 25th March 1861.

"4. Two Deputy Superintendents will be posted to each of the following Circles, viz. Northern, Central, and Southern, to act under the orders of the Superintendents."

Rule 1.—The chief duties of Deputy Superintendents of Vaccination are to assist the Superintendents in the *inspection* of the work of Native Vaccinators; to explain to the inhabitants of the districts, in which they may be, the objects of vaccination, and to encourage its diffusion by persuasion and by all legitimate means.

Rule 2.—They will report to the Superintendent whether the Vaccinators are perfectly competent to perform vaccination, and are able to judge whether the operation has proved successful or otherwise.

Rule 3.—Deputy Superintendents will examine thoroughly the Native returns of the Vaccinators, to see if their nominal rolls or registers are correctly framed and kept up to date, and to verify and check the registers. They will *personally* ascertain whether the columns in the Returns of "Age," "Successful," "Unsuccessful," and "Doubtful" are correctly filled up, and report to the

Superintendent any misconduct of the Vaccinators, particularly should they detect any falsification of Returns.

Rule 4.—On every Monday the Deputies will report to the Superintendent how they have been employed each day of the previous week. The reports at the end of the month will be summarised by the Superintendents, attached to and sent in with his own Employment Return to the Deputy Inspector General of the Division, for transmission to the Principal Inspector General.

Rule 5.—Deputy Superintendents are not to be the channel of communication between the Native Vaccinators and Superintendent, nor are any returns or reports from Vaccinators to be sent through Deputies, except such as the Superintendent may transmit for verification, examination, &c.

Rule 6.—Deputy Superintendents are *not* generally to communicate by letter with Native Vaccinators, but are *personally* to give any orders the Superintendent may direct, and personally to advise and encourage the Vaccinators. They are not to originate orders, as all such must be issued by the Superintendent.

Rule 7.—Deputy Superintendents will not have any special locality assigned them, but they must be kept constantly moving from the station of one Native Vaccinator to that of another, as the Superintendent may direct.

Rule 8.—Deputy Superintendents will be provided with a few of the most useful Surgical Instruments, and with a Box of Medicines in a portable shape, which will be replenished from time to time from any Civil or Military Hospital in the districts on their simple requisition.

Rule 9.—The pay of Deputy Superintendents will be drawn by the Superintendent of Vaccination in the General Abstract for the Establishment.

Rule 10.—Superintendents will understand that it is the wish of Government that the Deputy Superintendents of Vaccination should thoroughly examine into the progress of Vaccination in such localities, and at such times, as the Superintendent may direct; and Superintendents must hold out encouragement to their Deputies zealously and efficiently to perform their allotted duties.

9. As His Excellency the Governor in Council is aware, the appointments were not only not sought for by the members of the Sub-Assistant Surgeon class—although bringing with them increased emoluments,—but the situations were relinquished, with one exception, as soon as made, and at the present time, instead of six Deputy Superintendents for the three great Circles, there is only one in the Northern Division.

10. The great objection to the appointments seems to have been that it involved the necessity of travelling, and entailed considerable expense to the individual in providing proper equipment, whilst there can be no doubt that it was distasteful to others as estranging them from the practice of the profes-

sion to which they had been educated, and was, moreover, a duty they were not aware they should be called upon to perform when they entered Government Service; hence the number of resignations which resulted.

11. Since the publication of the above Notification, the undermentioned Sub-Assistant Surgeons have resigned Government Service, viz :—

Rustomjee Merwanjee.....	7th August 1861.
Framjee Shapoorjee.....	28th August 1861.
Dadabhoy Jamsetjee	Ditto.
Dossabhoy Hormusjee	Ditto.
Burjorjee Framjee	28th September 1861.
Pestonjee Nowrojee.....	16th October 1861.

12. It would be out of place to enter into the consideration of the scheme as laid down by Government, or to discuss the bearing of the question with respect to the future effect of carrying out the measure upon the class of servants chiefly affected—Sub-Assistant Surgeons, or upon the cause of medical education in this Presidency; but I think the result of the first year's experience of the measure, coupled with the very considerable falling off in vaccination, is not such as to augur great success hereafter.

13. The condition of the lymph employed in the several Circles of vaccination was reported to be "*good*" and effective. In several instances it was received direct from England. With the exception of Bombay itself, there was almost an entire absence of small-pox throughout the Presidency; but whenever or wherever it was reported, active measures were adopted by the Superintendents and their establishments to arrest its progress.

14. With reference to para. 2 of Government Resolution, No. 221 of the 7th February 1862, I trust the decision of Government respecting pensions to superannuated Vaccinators may be early received, to enable changes in the several establishments to be made, which are urgently required to carry on Vaccination in a systematic and efficient manner.

15. In conclusion, I venture to express a hope that Government may be pleased to overlook the brevity of the Report, inasmuch as it appertains to the working of a Department for a period antecedent to my taking charge of my present duties.

I have the honour to be,

Sir,

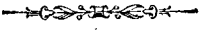
Your most obedient Servant,

M. STOVELL, M.D.,

Principal Inspector General, Medical Department.

Bombay, 9th April 1862.

INDEX TO THE FOLLOWING REPORTS.



VACCINATION UNDER SUPERINTENDENTS— PAGE

Presidency Division 1
Central Circle 2
Southern do. 3
Northern do. 4
Sind Division 6
Kattywar Circle 7
Kutch 8
Peint (Nassick) .. .. ib.

VACCINATION UNDER CIVIL SURGEONS—

	PAGE		PAGE
Tanna	9	Surat	15
Poona	ib.	Broach	16
Ahmednuggur	10	Belgaum	ib.
Sattara	11	Dharwar	17
Sholapore	ib.	Kolapoor	ib.
Dhoolia	12	Rutnagherry	18
Nassick	ib.	Kurrachee	ib.
Ahmedabad	13	Hydrabad	19
Kaira	14	Shikarpoor	ib.
Rajcote	ib.	Aden	20

APPENDIX—

Vaccination under Superintendents .. .. Table No. 1
Do. do. Civil Surgeons .. .. No. 2
Do. do. Native Chiefs .. .. No. 3
General Abstract of Vaccination .. .. No. 4
Table of Ages .. .. No. 5
Employment Return of Superintendents of Vaccination .. .. .. No. 6

VACCINATION UNDER SUPERINTENDENTS.

PRESIDENCY DIVISION.

Local Superintendent.—Sub-Assistant Surgeon ANUNTA CHUNDROBA.

Establishment.—Three Vaccinators and Seven Peons.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	8,027	28	....	6,760	84·2
1861....	8,861	834	....	7,185	81·0

Eight thousand eight hundred and sixty-one persons have been vaccinated, there being thus an increase of 834 over the total vaccinated during the year 1860, and 1,128 over the average of the five preceding years. Of these, 5,107 were males, and 3,754 females. As to caste, 967 were Christians, of whom 472 were Europeans; 5,688 were Hindoos of all castes; 1,602 Mussulmans; 535 Parsees; and 69 of other castes, chiefly Jews. As to ages, 4,080 were under, and 4,781 above, one year of age. Of the total vaccinated, 7,185, or a percentage of 81·08, were successful; 891 were failures; and 785 have been entered as doubtful, as the result could not be ascertained.

2. During the first part of the year small-pox prevailed to a great extent, and the attendance at the stations, both in the mornings and evenings, was very great; but towards the end of the year small-pox having disappeared, the attendance fell correspondingly.

3. Want of sufficient supply of good lymph is being daily felt with increased severity, as the reluctance on the part of parents to allow matter being taken continues unabated. During the last three or four months it has frequently happened that many applicants for vaccination have been obliged to return disappointed, and have had to attend for several consecutive days before they could get their children vaccinated.

4. The authorities of the Fort Gratuitous Dispensary, with some of the Parsee Graduates, have been unremitting in their exertions to induce the Parsees to have recourse to vaccination, and to a certain extent they have been successful. There were 535 Parsee children vaccinated at the stations, being 228 more than the number vaccinated in the previous year, and 131 more than in 1858, the number of which was the largest ever vaccinated in the course of one year during the past nine years. Probably the increase may be owing, to a certain extent, to the unusually severe epidemic of small-pox of the past year. There can, however, be no doubt that comparatively large as the number is, it is nothing compared to what it ought to be, or what it would have been, if the greater part of the Parsee community were to avail themselves of the advantages of vaccination.

CENTRAL CIRCLE.

Superintendent.—Assistant Surgeon F. H. PLUMPTRE.

Establishment.—Thirty Vaccinators.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	44,782	4,935	....	42,733	95·4
1861....	42,518	....	2,264	39,799	93·6

The Annual Report of vaccination in the districts I have recently held charge of, requires to be viewed in its two aspects—as the late North Deccan Division, and the Central Circle, which latter comprehends, in addition to the three zillahs of Poona, Ahmednuggur, and Khandeish, that of Tanna, which, until the 1st of July last, constituted one-half of the late Concan Division.

2. No alteration has been made in the system of checking Returns, nor do I see how any improvement can be made over the excellent and simple one introduced by Assistant Surgeon Davey, the former Superintendent of the late Northern Deccan Division. The plan of having registers of vaccination kept by the Koolkurnies of villages in which the vaccinators have been engaged, has been continued, and I believe that at the present time there is hardly a village throughout the Khandeish, Ahmednuggur, and Poona zillahs in which the registers of the vaccinated are not kept, and, as far as I can judge by personal inspection, faithfully kept.

3. On the subject of prejudice I have little to add to my remarks of last year beyond that the experience of the past twelve months confirms all I had previously said. It is in large towns, among large communities, that prejudice or indifference to the operation appears to exist most, and where the strongest objections prevail among parents to having lymph taken from their children. For instance, in Parnier, lately inspected by me, I found fifty children had been vaccinated, all from lymph in glasses brought from the surrounding villages, instead of direct from the vesicles, thus materially retarding the vaccinator in his work, besides making the success of the operation more questionable.

4. Inoculation still appears to be carried on to a limited extent in this Circle. In March last I received information of a man going about inoculating children in the villages in the Dhonga Petta near Poona. I communicated with Mr. Kemball, the Magistrate in charge, who immediately took effectual means for its suppression. Among the village population there does not appear to be any impression that inoculation is objected to by Government.

SOUTHERN CIRCLE.

Superintendent.—Assistant Surgeon W. PEACH, M.D.

Establishment.—Twenty-four Vaccinators (Government).
Eighteen Vaccinators (Native Chiefs).
One Vaccinator (Sawunt Waree State).

ESTABLISHMENT.	Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government	1860....	35,904	2,751	....	32,978	91·8
	1861....	25,391	....	10,513	23,758	93·5
Native Chiefs ..	1860....	9,351	....	594	8,654	92·5
	1861....	11,971	2,620	....	11,075	92·5
Sawunt Waree ..	1860....	4,585	450	....	3,837	83·6
	1861....	4,645	60	....	3,997	86·0

During the year 1861 (in July) the Southern Deccan Division became the Southern Circle by the addition of the Rutnagherry Zillah and the Sawunt Waree State. Seven vaccinators were added to the establishment at the same time from the late Concan Division.

2. At the close of the year 1861 I was at Ghutt. After inspecting the work of the vaccinator employed by the Chief of that Talooka, I proceeded to Teekoteh and examined the operations of the vaccinator entertained by the Koorundwar Chiefs. I found it unsatisfactory, and the man has since been transferred to another portion of the Jagheer.

3. Afterwards proceeding to Beejapoor, I thoroughly inspected the work of the Government vaccinator stationed there (General No. 133), and found it tolerably satisfactory. Here I made an attempt to introduce lymph obtained from Bombay, but it proved unsuccessful.

From Beejapoor I went to Indee, a considerable town in the Sholapore Zillah, and found the apprentice stationed there (General No. 168) doing well. His lymph was excellent, and his operations generally successful.

4. I then visited Akulcote, and inspected the work of Vinkutash Durmajee, the vaccinator employed by the Chief. He was suffering from sickness, but his lymph was good and active. From thence proceeding northwards I reached Markeb, and inspected the work of Assistant Vaccinator Mahadeo Ramchunder (General No. 81), and found it tolerably satisfactory.

5. Thence, in a westerly direction, I visited Punderpoor in the Sattara Collectorate, where Trimbuck Annunt (General No. 84) is working. After a thorough inspection I went, *vid* Sholapore and Indee (again inspecting the operations of the vaccinator at the last-mentioned place), in a southerly direction to Moodebhal, where I found the work of Assistant Vaccinator Shreeneewas Ramchunder (General No. 87) very unsatisfactory. His returns for some time have been very small, but his health has not been good.

6. From Moodebhall I went to Bagulcote in the Belgaum Zillah, and after inspecting the work of Jaeram Kristna (General No. 88), I proceeded to Belgaum, where I arrived on the 2nd June and closed my tour for the season.

NORTHERN CIRCLE.

Superintendent.—Assistant Surgeon RUSTOMJEE BYRAMJEE.

Establishment.—Thirty-two Vaccinators (Government).

Twenty-three Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government	1860....	42,594	....	79	37,547	88·1
	1861....	41,349	....	1,245	36,948	89·3
Native Chiefs ..	1860....	22,886	3,603	.....	19,288	84·2
	1861....	24,216	1,328	.....	20,829	86·0

In the month of July 1861 the Eastern and Western Vaccination Divisions of Guzerat were amalgamated and formed into the present Northern Circle. This being the first Report since the formation of this Circle, I propose to give a general outline of its extent, population, &c. It extends from 20° 15′ to 24° 20′ North latitude, and 71° 40′ to 74° 20′ East longitude, or is about 280 miles long by from 10 to 200 miles broad. It includes the British territories under the collectorates of Surat, Broach, Kaira, and Ahmedabad, also the Punch Mahals and the territories of the Native States—Rajpeepla, Rewa Kanta, Mahee Kanta, Pahlenpoor, and Edur.

2. The following table shows the area and total population per square mile:—

	Area in Square Miles.	Population.	Population per Square Mile.
1. Ahmedabad	4,437	561,560	126·5
2. Kaira	1,375	580,631	422·2
3. Broach	1,325	259,284	195·6
4. Surat	1,540	407,239	264·4
5. Punch Mahals	1,400	143,595	102·5
Total....	10,077	1,952,309	193·7
6. Mahee Kanta	4,000	311,046	77·7
7. Pahlenpoor	4,041	365,362	90·4
8. Rewa Kanta and Rajpeepla	4,868	325,156	66·7
Total Native Chiefs....	12,909	1,001,564	77·5
Grand Total....	22,986	2,953,873	125·1

3. Patels give or withhold their aid to the vaccinator according to their bias for or against vaccination. The most zealous supporter of vaccination I met with was a poor Patel whose face was disfigured from small-pox, and whose girl had lost an eye from the same disease. Hindoos taken as a whole are most favourable to vaccination, and the Parsees the *least*. But among the Hindoos the Nagger Brahmins are the most averse, with the exception of the wild fishermen. This is a very unfortunate circumstance, as these Brahmins are the most influential natives of this province, from their intelligence and their position, not only religious, but public, holding Government situations, as they do, from Mamlutdarships downwards to village Tallateenship. Here I must close these brief remarks for want of time, being about to be relieved from the work of this office this day.

4. The table shows a decrease, amounting to 1,245, in the number vaccinated by the Government establishment during the year, as compared with the work accomplished during the corresponding months of 1860.

5. It is due to the Vaccinators to say, that as a body I believe they have worked steadily and well throughout, while the conduct of several has given me every satisfaction. In one or two instances it will be observed that the number falls short of the minimum fixed by the late Superintendent of 120 operations per month. Various causes have contributed to this, and some, such as temporary sickness, travelling or working in a thinly-inhabited district, are admissible enough. But others were open to question and productive of vexation, particularly the frequent complaint of the assistance of peons not being forthcoming—a matter no doubt sometimes unavoidable, considering the claims of other duties, and the late reductions of establishment. But even with these abatements the general results may be regarded as satisfactory, giving as they do 129 vaccinations as the average monthly work of each Vaccinator. For the rest I have only to observe that the accuracy of their Returns has invariably been tested by the check and scrutiny of the village authorities, through the agency of the police, and on no occasion has any single instance of discrepancy as respects the figures been disclosed.

6. The lymph continued good throughout, and the resulting vesicles were reported as well-formed and distinctive. In no instance was any deterioration of the virus observed, nor was there on any occasion interruption from its loss, whether by sickness or neglect, as occurred in the previous year.

7. Small-pox was reported in the Mandal and Veerungaum districts, as well as at Deesa, in April and May, and a few cases also were brought to notice by the vaccinator employed in the Duskroie. No instance of inoculation was heard of; and as regards the great bulk of the people, there does not appear to be any more serious obstacles to the spread of vaccination than apathy and indifference.

SIND DIVISION.

Superintendent.—Assistant Surgeon T. E. P. MARTIN.

Establishment.—Fifteen Vaccinators.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	59,568	10,043	....	58,939	98·9
1861....	49,161	....	10,407	48,602	98·8

A falling off occurs in the number of operations this year as compared with 1860 to the extent of 18,407.

2. In explanation of the deficiency, it may be said that the year has been unusually sickly; that two or three of the Vaccinators had to work during continued ill-health; and that there have been changes in the establishment which have had an influence in lessening the number of operations. Taking these circumstances into account, it may be considered that the actual work done fairly represents the ordinary working powers of the establishment.

3. During the year, 28,034 males and 21,127 females have been vaccinated. Under one year of age there were 13,977, and above that age 35,184 operations. The number of successful cases (48,602) compared with the total number vaccinated (49,161) gives 98·8 as the percentage of success in the operations of the year. The percentage of success is always high, and it is necessary to repeat the qualification mentioned in previous reports—that this success is the result of the re-vaccination of cases which were not considered satisfactory after the first operation. As far as my own personal examinations have gone, it may be said that so qualified, vaccination is nearly a certain operation when the lymph is taken from the vesicle on the eighth day. The imperfect cicatrices which are noticed occasionally in every Vaccinator's work are not the result of imperfect lymph, or of a careless operation, but of the inattention generally of parents to preserve vesicles from being rubbed by tight-fitting sleeves or by the hands. From these two causes I think it probable that numbers of operations reported as successful are really doubtful.

4. The vaccine lymph continues in good condition; it does not appear to have suffered any deterioration. This may be considered to afford satisfactory proof of the general care of vaccinators to use good lymph. No ill-effects have been known to result from its use.

5. Epidemic small-pox has been very prevalent during the year—in the early part of it in the Halla districts, and towards its close in the Nowsherah, Larkanna, and Khoree districts.

6. It would seem that an average of about 50,000 operations in the year represents the work that the establishment can accomplish after very hard and continuous exertion, and with considerable amount of valuable assistance from the Civil authorities.

7. It is considered that this represents about a fourth part of what could be effected with a sufficient number of Vaccinators.

8. During the year the Commissioner in Sind was pleased to open up the subject of vaccination in the territory of His Highness Meer Alli Morad. The results are very promising, His Highness having actually consented to entertain two Vaccinators, wishing to have them instructed.

KATTYWAR CIRCLE.

Superintendent.—Assistant Surgeon R. G. LORD.
Establishment.—Eight Vaccinators (Government).
Twenty-one Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government ..	1860....	4,257	....	487	3,976	93·4
	1861....	6,100	1,843	....	5,677	93·0
Native Chiefs ..	1860....	13,234	....	125	11,897	89·8
	1861....	16,122	2,888	....	14,648	90·8

There is abundance of good lymph in Kattywar, and when carefully selected where the vesicles have not been interfered with and at the proper time, and transferred, as it usually is, fresh from one child to others, perfectly satisfactory vaccination is generally the result. In some cases, particularly about the commencement of the rains, when a tendency to become purulent is observed in the lymph earlier than at other seasons of the year, I have generally found it advisable for a few weeks, until this evidence of a tendency to degenerate has quite disappeared, to select the clearest and most pure vesicles, and vaccinate from them on the seventh day (*i. e.* 24 hours earlier than usual). A few repetitions of this has invariably succeeded in restoring completely its former characteristics to the vaccine. The transmission of infection to a distance is a subject of much interest, and the possibility of doing so by sending lymph in a liquid state by Dr. Husband's plan must be acknowledged one of the greatest aids towards the propagation of good vaccination that modern discovery has afforded, and when practicable it will, I presume, be resorted to in preference to all other means; but there may be cases in which it cannot be practised, and where, as hitherto, infection must be sent in a dried state. In such a case the principle to be observed is to exclude moisture, which, with moderate heat, far sooner decomposes the lymph than a much higher temperature if it be dry. This is practically illustrated in Dr. Davey's remarks as to the means so successfully employed by him in transmitting lymph, by enclosing some coarsely-powdered quicklime in the packets as suggested by Dr. Maxwell, of the Madras Army, the good effect of the lime being doubtless due to its great affinity for water, the particles of which were thus absorbed before reaching the other contents of the packet. I may observe that a similar result seems to have been attained by the late Dr. Carrie, of Agra, who preserved his lymph or crusts (much as I have been in the habit of doing) in layers of cotton wrapped in varnished calico or oiled silk.

2. There is no inoculation practised in Kattywar so far as I have ever been able to learn, and no obstacles to vaccination but the prejudices and apathy of the people, added perhaps to a want of faith in its efficacy, and the usual dislike to having infection taken from their children for transfer to others.

3. Vaccination may be said in most cases in Kattywar to exist by sufferance—it was undertaken by the Chiefs to please the Government; it is carried on with the same view. Its spread depends therefore much on the notice taken of it by the Government Agents, and their coun-

tenance especially should be requested for it, and its progress be inquired after by them earnestly, and as if with interest, while they travel through their districts. The Superintendent has of himself no political or magisterial power, so carries but little weight, and can only influence the Chiefs through the Political Agent or Assistants. To the latter then must Government look in a great degree if it be their desire effectually to spread the benefits of vaccination through this large and, in this respect, insufficiently-provided-for province.*

KUTCH.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	104	....	57	98	94·2
1861....	26	....	78	21	80·7

REPORT BY SURGEON M. STYLE, IN CHARGE OF BHOOJ DISPENSARY.

The Vaccinators usually go to perform their duties in the interior of Kutch in the beginning of November and return at the close of June. But owing to the total failure of the monsoon in 1860, His Highness, with the concurrence of the Political Agent, did not detach them into the districts. It was only in November last that they have been sent on their tour, and since that up to the 31st of December they have only vaccinated twenty-six persons. It seems from the reports of the Vaccinators that they get even this small number after visiting several villages. It is evident that their business is not carried on well, and under these circumstances there is every possibility of lymph being spoiled.

PEINT (NASSICK).

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	590	162	....	453	76·7
1861....	122	....	472	68	55·7

* To stimulate individual exertions among the Vaccinators, I had in contemplation to offer annually prizes of 50, 30, and 20 Rupees each to the three most deserving men on the establishment, whether in Government or Native Chiefs' employ, the expenditure of which small amount (Rs. 100 per annum) I hoped to have been able to get sanctioned from one of the local funds (the infanticide one probably). The qualifications for prizes I would say should be—*1st, Industry* (value 1,000), for highest number vaccinated; *2nd, Capability* (value 500), as evidenced by success of operation performed, distinctness of scars in old cases, and good quality of lymph in new; *3rd, Attentiveness* (value 500), as shown by regularity in conducting business, correctness of Returns, and punctuality in forwarding them; *4th, Fitness* (value 500), as shown by absence of complaints and favourable reception of the Vaccinator by villages and authorities under whom employed. The prizes to be awarded by Superintendent and Vaccination Committee. Names of successful candidates to be noted in the Political Agent's annual Report of Province; and if a little credit were given by Government to the Chiefs in whose employ successful candidates were, it would, I am sure, give encouragement and create an interest in the subject not now felt.

VACCINATION UNDER CIVIL SURGEONS.

TANNA.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. KEARNEY (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	221	....	14	207	93·6
1861....	256	35	....	221	86·3

The Annual Vaccine Return is more favourable than that of the preceding year, there being an addition of thirty-five vaccinations, though the Return includes a period of nine months only.

POONA.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. G. FRASER, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	1,889	429	....	1,540	81·5
1861....	1,753	....	136	1,487	84·8

During the year 1861 there have been 1,055 males and 698 females vaccinated, which, as compared with the total vaccinations for the previous year 1860, shows a decrease of 157 males, and an increase of 21 females, the total number of vaccinations for the year 1861 being 136 less than for the preceding year 1860. The lymph has been very good throughout the whole year, and in the majority of cases has produced a full, healthy-looking vesicle. In those cases in which the lymph has been sent to a distance on glasses, it has, so far as I am aware, proved equally successful. The Assistant Vaccinator states the greatest number of failures to have occurred during the wet, rainy season of the monsoon.

2. The Assistant Vaccinator is a very steady and attentive man, and visits the different parts of the city on different days of the week. He is always accompanied by a police peon as a protection and guide, and since this practice has been adopted he has seldom met with any obstruction or opposition in the performance of his duty.

AHMEDNUGGUR.

One Vaccinator under the Civil Surgeon, Asst. Surgeon H. Cook, M.D. (Officiating).

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	932	....	54	703	75·4
1861....	1,119	187	....	870	77·7

The total number of vaccinations would have been greater than it at present stands but for the great prevalence of measles amongst children for the first five months of the year. This disease was universal amongst the children of the town during the time specified, and acted reasonably enough to deter parents from bringing their children to be vaccinated whilst suffering from the sickness itself or from the debility which usually followed.

2. Of the total number, 605 were males, and 514 females, showing a less disparity between the sexes than that usually observed at this station; 236 were children under one year, and 883 children above that age and adults. There were only 122 decidedly unsuccessful cases, and in these the want of success was almost entirely due to want of care on the part of mothers in disturbing and abrading the vesicles before they were fully formed. As stated in the first paragraph, the percentage of success is rather in excess of last year. There is a great unwillingness on the part of parents to show their children after vaccination. In very many instances the child has been watched by the Vaccinator up to within a few days of the perfection of the pustule when suddenly the child has disappeared, the parents having under some pretence taken it away into the country or secreted it in the town, apparently from some undefined dread lest the child should suffer inconvenience or the effect of the vaccination be lessened by the virus being abstracted from the pustule by the Vaccinators. This leads to the great number of cases placed under the head of "Doubtful."

3. The quality of the lymph throughout the year has been all that could be desired—producing large, well-formed vesicles.

4. Although we have had an unusually heavy monsoon, yet the continued dampness has had no ill effect on the lymph.

5. No case of small-pox has come under my observation during the year in either of the hospitals under my charge. There is no native inoculator resident in Nuggur, nor can I hear that the operation of inoculation is ever performed here.

SATTARA.

One Vaccinator under the Civil Surgeon, Assistant Surgeon M. M MACKENZIE.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	1,803	....	213	1,622	89·9
1861....	1,811	8	....	1,630	90·0

Of the various castes the Hindoos have been the most numerous, viz. 1,622; next Mussulmans 116; Christians 8; and other castes 65; total 1,811. Of these, 978 were males, and 833 females, being 145 more of the former. The greater proportion were vaccinated under one year, viz. 918; the remainder 893 above that age.

2. The inhabitants seem fully to appreciate the value of vaccination, and come forward at all times most willingly. Every assistance is given by the Civil authorities to the Vaccinator in the performance of his duties, and I hear of no complaints of obstruction, &c.

3. The lymph has at all times proved good and abundant, and has, when called for, been despatched to Mahableshwur and other places.

SHOLAPORE.

One Vaccinator under the Civil Surgeon, Assistant Surgeon C. J. SYLVESTER, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	1 57	52	....	1,043	71·6
1861....	1,434	....	23	995	69·3

During the year under review the number vaccinated has amounted to 1,434, of which 995 were successful, 236 unsuccessful, and 203 doubtful, the percentage of success being 69·3. As compared with the year 1860 there is a slight decrease in the total number operated on, also in the percentage of success, that of last year being 71·6.

2. The lymph has been of good quality throughout the year, and there has been no interruption in its supply. The results have been verified by me weekly, the children who have been operated upon in one week being brought for my inspection in the week following in order that any deterioration in the character of the vesicles might be at once detected.

3. In regard to the proportion of the sexes who have been vaccinated during the above period, the usual preponderance in the number of males has not obtained; on the contrary the excess is on the side of the females, of whom 755 have been vaccinated, being 76 more than the number of males, which has amounted to 679.

DHOOLIA.

One Vaccinator under the Civil Surgeon, Assistant Surgeon R. W. JAMES, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	899	266	....	847	94·2
1861....	802	....	97	800	99·7

There have been 802 persons vaccinated during the past year, showing a decrease of 97 from the previous year. This I am inclined to attribute to indisposition of the Vaccinator for nearly two months from attacks of ophthalmia and fever. His duties were, however, performed by 1st Grade Apprentice Chotay Khan, of the Civil Hospital, who, though anxious to do his best, could not devote his time so fully to vaccination, nor could it be expected that he could have felt the same interest in the work as one who gained his bread by it. There have only been two doubtful cases, which gives a percentage of only 0·25—a result most satisfactory, and one that proves that the lymph used in this province has not deteriorated.

NASSICK.

One Vaccinator under the Sub-Assistant Surgeon.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	1,797	687	....	1,435	79·8
1861....	1,656	....	141	1,333	80·4

AHMEDABAD.

One Vaccinator under the Civil Surgeon, Surgeon D. WYLLIE, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	2,647	27	....	2,478	93·6
1861....	2,820	173	....	2,666	94·5

The vaccinations for the year exceeded by 173 the number performed in 1860. The increase is not sufficiently marked to dwell upon, but most probably it was due to some sense of proximate danger, awakened by the occurrence of a few cases of small-pox during the summer months. On the other hand, the prevalence of measles throughout the early part of the year tended materially to narrow the sphere of operations, and thus the difference is less decided than it would otherwise have been. On the whole, however, the result is satisfactory, and bears evidence to the Vaccinator's industry.

2. The lymph continued of good quality throughout, and the resulting vesicles were well-formed and distinctive. On no occasion has any tendency to deterioration been remarked; and the virus was found to be equally effective in the rains as during the other seasons. Moreover, there has been abundance available at all times to meet the requirements of neighbouring medical officers, and supplies were also sent, as wanted, to Surat, Deesa, Neemuch, Nusseerabad, Khairwarrah, and Abboo.

3. A few cases of small-pox, perhaps about thirty in all, were reported in the city during the summer months. With one or two exceptions they appear to have been imported—some from the neighbourhood of Dundooka, but the majority from outlying districts of the Sadra State, which seem to suffer from the epidemic more or less every season owing to their proximity to Meywar. No instance of inoculation has been brought to notice for many years past, nor is there anything to obstruct the progress of vaccination beyond a general feeling of indifference on the part of the population, with here and there a shade of prejudice or distrust, mostly manifested in the shape of idle excuses framed for the purpose of postponing or evading the operation. But though prone to seek delay on trivial grounds, they seldom after all resist well-timed persuasion.

KAIRA.

One Vaccinator under the Civil Surgeon, Assistant Surgeon C. K. COLSTON.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Success fully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	110	....	1,019	103	93·6
1861....	520	410	....	447	85·9

Vaccination has been carried out in the first ten months of the past year with great care, and I can myself certify to the successful extent returned, as every case was brought for my inspection previous to its being pronounced successful or otherwise. For the last two months of the year the station was without an Assistant Vaccinator, and consequently vaccination has been restricted; for though there is no active opposition to its being carried out in Kaira, still, through apathy and indifference, the inhabitants will not voluntarily come or bring their children to the Dispensary for that object; hence from house to house vaccination is necessary, and cannot be carried out without the aid of a special Vaccinator.

RAJCOTE.

One Vaccinator under the Civil Surgeon, Assistant Surgeon R. G. LORD.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Success-fully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	966	....	443	848	87·7
1861....	1,123	157	....	972	86·5

Though numerous cases of small-pox occurred in the native town, there has not been much loss of life from the disease.

2. During the year, 1,123 have been vaccinated. Of these, 972 were successful, 95 failed, and 56 were doubtful. In the previous year there was a total of 966 vaccinations, so that for the past year an increase of 157 has been registered. Some of the children belonged to the wealthier classes of natives. Two of the Rajcote Chief's children (a boy and girl) were successfully vaccinated. From the increase of vaccinations, both in the station and in the districts, the people continue to value the blessings of vaccination; and it is a satisfactory proof that there is no want of zeal in the Vaccine Department. Those who are averse to bring the children to hospital are encouraged by having their children vaccinated in their own houses. The vaccine lymph has been of good quality and abundant, and where the vesicles were allowed to pass through their usual course, the cases were successful; but often, from not being attended to, vesicles are injured, and rubbed off, and lose their salutary effects. The vaccination is practised weekly by the Station Vaccinator, and no opportunity of ensuring the spread of vaccination is allowed to pass unavailed of. Inoculation is not practised in any part of Kattywar.

SURAT.

One Vaccinator under the Civil Surgeon, Surgeon-Major M. PELLY (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	1,382	84	....	1,187	85·8
1861....	1,871	489	....	1,624	86·7

The total number vaccinated during the year 1861 in the town of Surat was 1,871. That for the preceding year was 1,382, showing an increase in favour of the former of 489.

2. The average of the previous five years was 1,458; so that the number vaccinated during 1861 is also an increase upon that of 413. The general result too has been more than usually favourable, it being at the rate of 86·7 per cent. of successful cases, whereas in no year since 1857 has it been so high. The most probable cause for this increase is, that variola was raging for some months in the town, and people thought it advisable to let their children be vaccinated.

BROACH.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. GLEN.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	1,904	343	....	1,553	81·5
1861....	1,541	....	363	1,323	85·8

The total number of persons vaccinated during the year 1861 amounts to 1,541, being a decrease of 363 when compared with the year 1860. Of this number, 856 were children under one year, and 685 above that age. Again, 991 of these were males; the remainder females. The successful cases amount to 1,323, being a percentage of 85·8. The lower castes of the Hindoo community, as is usual, furnish the largest number of children for vaccination. The cause of the decrease of children vaccinated this year is attributed by the Vaccinator to the withdrawal of the peon who assisted him in his duties. The withdrawal was occasioned by the Broach Collectorate having been reduced to a Sub-Collectorate, thereby diminishing the number of peons on the establishment.

BELGAUM.

One Vaccinator under the Civil Surgeon, Surgeon-Major H. GLASSE.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	449	....	29	411	91·5
1861....	624	175	....	604	96·7

Six hundred and twenty-four persons have been vaccinated during the past year in the town of Belgaum, which is an increase of 175 on the number vaccinated during the previous year. Of these, 604 were successful and 20 unsuccessful, or a failure of 1 in every 31. Besides the above, 62 subjects have been vaccinated in the Sudder Bazar by the Assistant Vaccinator, of which number 9 failed. A few cases of small-pox have occurred in the Native Town and Sudder Bazar; none have died, and they have all, with two exceptions, been mild. The quality of the lymph has been good throughout the year, and the vesicles of a normal character.

DHARWAR.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. MILLS (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	1,052	....	170	933	88·6
1861....	1,087	35	....	857	78·8

During the past year there has been an increase of 35 over the previous year. This increase should have been greater, but the Vaccinator was sick in the beginning of the year, and during the months of February and April the lymph was lost and was with difficulty re-established, besides which, for some time the Vaccinator did not exert himself. The usual indifference of the natives has been somewhat dispelled during the months of November and December by the prevalence of small-pox, and they have received vaccination for their children with unusual willingness. Small-pox has been very prevalent in the town and station during the last two months, and many cases have come under my observation in persons on whom vaccination had been successfully performed, and one or two in persons who had before had small-pox; these cases have all been mild as to the constitutional symptoms, although in several the vesicles have been very numerous and have run their regular course.

KOLAPOOR.

One Vaccinator under the Civil Surgeon, Assistant Surgeon C. G. WIEHIE, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	3,017	981	....	2,801	92·8
1861....	2,877	....	140	2,658	92·3

The vaccinations during the past year number 2,877, showing, in comparison with those of the preceding year, a small decrease of 140. These figures do no include the vaccinations by the Station Vaccinator in the camp and cantonment bazar. Since the close of the monsoon, cholera has prevailed in the town and to a far greater extent in the neighbouring districts. This, together with the existence of small-pox also about that time, may naturally account for the operations having fallen short of those of the preceding year. The successful vaccinations amount to 2,658, being a percentage of 92·3. This equals the ratio of the preceding year and may be considered satisfactory.

RUTNAGHERRY.

One Vaccinator under the Civil Surgeon, Asst. Surgeon E. N. C. De Crespigny, M.D.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	544	....	417	472	86·7
1861....	522	....	22	456	87·3

There has been a slight decrease in the numbers vaccinated compared with last year's Return, and there is still a considerable falling off when compared with the Returns of previous years. The cause of decrease is partly due to the indolence of my Assistant Vaccinator, and partly to the fact of his dismissal in October for misconduct. The vacancy has not yet been filled up, but operations were carried on by the candidate during the month of November and since then by an Assistant on the Superintendent of Vaccination's Establishment, who received at our hands supplies of lymph of which especial care was taken to see that the quality was good. Operations were twice suspended for some days during the year owing to the carelessness of the Assistant Vaccinator in having allowed the lymph to die out, as brought to the notice of the Deputy Inspector General of Hospitals in the correspondence which took place on the subject; complaints were also made that parents were averse to the vesicle being interfered with, and that this circumstance was another reason why lymph was not always forthcoming for propagation. But whatever difficulties the Vaccinator may have experienced on this head may be safely ascribed to his own rough and unconciliating manners, as my former Assistant (deceased) never made this an excuse for being without the means of carrying on his work. It will be observed that a large proportion of the operations are returned as unsuccessful. Besides ordinary causes another reason of unsuccessful result is to be found in the practice of vaccinating too many children at once from the lymph afforded by one little subject; for even when all the vesicles are well developed, lymph cannot be obtained in sufficient quantity from one child to vaccinate more than four or five others properly and successfully.

KURRACHEE.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. Bean.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	1,100	86	....	1,007	91·5
1861....	795	....	305	709	89·1

During the past year 709 persons have been successfully vaccinated, showing a decrease of 298 successful operations as compared with the previous year, and for this there are several causes: it was owing chiefly to the insanity which seized the Hindoo Vaccinator Thawardass Battia in the early part of the year, who was placed by his friends as a lunatic in the jail, thereby causing a suspension of vaccination for a period of nearly two months, during which time no other person could be procured to fill his place. In the beginning of March a Mussulman, Shaik Rahim, was appointed, but being new to the duty, and little instructed in it, it was long before he could exert any influence with the people, who still betray the same reluctance in producing their children for operation, or in bringing them afterwards for inspection, that has been before complained of.

HYDRABAD.

One Vaccinator under the Civil Surgeon, Assistant Surgeon W. STEDMAN.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	1,577	44	....	1,129	71·5
1861....	1,675	98	....	1,249	74·5

During the year 1861 the total number vaccinated was 1,675, being an increase of 98 on that of last year, which was 1,577. The number of males vaccinated exceed that of the females by 45; and regarding age, 648 were above one year of age, and 1,027 below that age. Of 1,675 cases of vaccination, 1,249 were successful, 184 unsuccessful, and 242 doubtful. The reason for so many being doubtful is accounted for by the Vaccinator from the parents of the children returning to their villages. The lymph and vesicles appear to be very good. There has been no epidemic of small-pox during the year, although a few cases have occurred in the city. The Vaccinator has much trouble in overcoming the dislike or want of confidence of the people in the efficacy of vaccination.

SHIKARPOOR.

One Vaccinator under the Civil Surgeon, Assistant Surgeon A. E. RIDDELL.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	1,423	6	....	1,421	99·8
1861....	1,445	22	....	1,444	99·8

During this year 739 male children and 706 female children have been vaccinated, making a total of 1,445. Out of these one case is recorded as doubtful. Of these, 1,318 were under one year. Of the total number vaccinated, 7 were children of Christians, 619 Mussulmans, 817 Hindoos, and 2 Parsees. Increase above last year 22. The average character of the lymph has been clear, and satisfactory vesicles are procured from the use of it. Lymph has been supplied to Jacobabad and to those Vaccinators who have applied for it. No opposition has been offered on the part of the natives to the practice of vaccination, which takes place once a week at the Charitable Dispensary in the town under my personal superintendence.

ADEN.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. F. STEINHAEUSER.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1860....	1,150	297	....	528	45·9
1861....	945	....	205	686	72·5

At the commencement of the year 1861 the lymph at this station was found to be satisfactory, and continued to produce typical vesicles until the month of March when it began to show symptoms of deterioration by yielding a much larger number of unsuccessful cases. In April, with the increasing heat, the number of failures so far increased that the virus was almost lost; an application was therefore made to Bombay for fresh lymph. In the month of May vaccination was still carried on with the old lymph and with more favourable results. In June a fresh supply arrived from Bombay, but being sent on points only, failed in every case both in my hands and those of the Native Vaccinators. Though there were numerous unsuccessful cases in July, yet a fair proportion of operations proved successful. The fresh lymph, however, sent by the Royal Jennerian Institution from London in this month completely failed, though numerous operations were performed with it by the Vaccinator, and carefully by myself. From the month of August until the end of the year the success met with in vaccinating with the old lymph has been beyond expectation.

APPENDIX.

TABLE

VACCINATION UNDER

Table of Divisional Vaccination, showing the Number and Names of the Divisions, and their and compared with those of last Year; the Total Number arranged according to Sex, Caste, Operations performed by each

Number.	Divisions.	Names of the Medical Officers Superintendents of Vaccination.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.		
					1860.	Increase.	Decrease.
1	PRESIDENCY	Sub-Assistant Surgeon Anunta Chundroba.	3	8,861	8,027	834	..
2	CENTRAL CIRCLE	Assistant Surgeon F. H. Plumptre.....	30	42,518	44,782	..	2,264
3	SOUTHERN CIRCLE	„ W. Peach	24	25,391	35,904	..	10,513
4	NORTHERN CIRCLE	„ Rustomjee Byramjee.	32	41,349	42,594	..	1,245
5	SIND	„ T. E. P. Martin	15	49,161	59,568	..	10,407
6	KATTYWAR	„ R. G. Lord	8	6,100	4,257	1,843	..
		Total....	112	173,380	195,132	..	21,752

No. I.

Superintendents.

Superintendents; the Number of Vaccinators employed; the Total Vaccinations performed, Age, and Result; the Ratio of Successful to Total Vaccinated; and the Average Number of Vaccinator, for the Year 1861.

Total Number Vaccinated, arranged according to—												Ratio per Cent. of Successful to Number Vaccinated.	Average Number of Persons Vaccinated by each Vaccinator.
Sex.		Caste.					Age.		Result.				
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful	Doubtful.		
5,107	3,754	5,688	1,602	967	535	69	4,080	4,781	7,185	891	785	81·0	2,953
22,142	20,376	38,505	1,498	1,050	..	1,465	5,665	36,853	39,799	1,331	1,388	93·6	1,417
13,439	11,952	23,197	1,574	104	..	516	5,541	19,850	23,758	949	684	93·5	1,058
22,535	18,814	35,024	4,071	4	67	2,183	22,524	18,825	36,948	2,783	1,618	89·3	1,292
28,034	21,127	6,374	41,314	..	..	1,473	13,977	35,184	48,602	225	334	98·8	3,277
3,258	2,842	5,354	659	..	..	87	2,911	3,189	5,677	205	218	93·0	762
94,515	78,865	114,142	50,718	2,125	602	5,793	54,698	118,682	161,969	6,384	5,027	93·4	1,548

TABLE

VACCINATION UNDER

Table of Vaccination under Civil Surgeons and others, arranged according

Number.	Divisions of Deputy Inspector General of Hospitals.	Civil Stations.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.			Sex.	
					1860.	Increase.	Decrease.	Males.	Females.
1	Presidency	Tanna	1	256	221	35	..	143	113
		Alibaugh	..	66	282	..	216	38	28
		Bandora	..	90	60	30	..	57	33
		Coorla	..	..	22	..	22	..	..
		Total..	1	412	585	..	173	238	174
2	Poona	Poona	1	1,753	1,889	..	136	1,055	698
		Ahmednuggur	1	1,119	932	187	..	605	514
		Sattara	1	1,811	1,803	8	..	978	833
		Sholapore	1	1,434	1,457	..	23	679	755
		Dhoolia	1	802	899	..	97	417	385
		Nassick	1	1,656	1,797	..	141	862	794
		Mahableshwur	..	119	84	35	..	60	59
		Total..	6	8,694	8,861	..	167	4,656	4,038
3	Northern	Ahmedabad	1	2,820	2,647	173	..	1,436	1,384
		Kaira	1	520	110	410	..	307	213
		Rajcote	1	1,123	966	157	..	600	523
		Surat	1	1,871	1,382	489	..	1,060	811
		Broach	1	1,541	1,904	..	363	991	550
		Total..	5	7,875	7,009	866	..	4,394	3,481
4	Southern	Belgaum	1	624	449	175	..	369	255
		Dharwar	1	1,087	1,052	35	..	588	499
		Kolapoor	1	2,877	3,017	..	140	1,455	1,422
		Rutnagherry	1	522	544	..	22	292	230
		Vingorla	..	144	19	125	..	87	57
		Total..	4	5,254	5,081	173	..	2,791	2,463
5	Sind	Kurrachee	1	795	1,100	..	305	481	314
		Hydrabad	1	1,675	1,577	98	..	860	815
		Shikarpoor	1	1,445	1,423	22	..	739	706
		Civil and Dispensary Hospitals	..	689	1,063	..	374	431	258
		Total..	3	4,604	5,163	..	559	2,511	2,093
6	Aden	Aden	1	945	1,150	..	205	618	327
7	Persian Gulf	Bushire	..	481	559	..	78	263	218
		Grand Total..	20	28,265	28,408	..	143	15,471	12,794

No. II:

Civil Surgeons and others.

to Divisions, and showing the Details as in Table No. I. for the Year 1861.

Total Number Vaccinated, arranged according to—											
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Average Number of persons Vaccinated by each Vaccinator.
Hindoos.	Mussulmans	Christians.	Parsees.	Other Castes.	Under One Year.	Above One Year.	Successful.	Unsuccessful	Doubtful.		
208	16	26	4	2	58	198	221	35	..	86·3	256
49	8	1	..	8	23	43	59	3	4	89·3	..
13	11	43	21	2	18	72	76	10	4	84·4	..
..	..	..	..	..	..	..	..	..	..	..	..
270	35	70	25	12	99	313	356	48	8	86·4	256
1,466	256	29	2	..	636	1,117	1,487	118	148	84·8	1,753
959	146	12	2	..	236	883	870	122	127	77·7	1,119
1,622	116	8	..	65	918	893	1,630	98	83	90·0	1,811
769	378	1	..	286	532	902	995	236	203	69·3	1,434
506	107	5	1	123	600	202	800	..	2	99·7	802
1,355	96	10	..	195	1,016	640	1,333	14	309	80·4	1,656
68	42	8	1	..	26	93	89	20	10	74·7	..
6,805	1,141	73	6	669	3,964	4,730	7,204	608	882	82·8	1,429
2,311	497	7	5	..	1,794	1,026	2,666	88	66	94·5	2,820
311	41	..	1	167	363	157	447	55	18	85·9	520
909	174	..	2	38	516	607	972	95	56	86·5	1,123
1,363	368	7	72	61	911	960	1,624	202	45	86·7	1,871
1,130	363	3	45	..	856	685	1,323	107	111	85·8	1,541
6,024	1,443	17	125	266	4,440	3,435	7,032	547	293	89·2	1,575
487	128	9	..	..	295	329	604	20	..	96·7	624
878	202	5	..	2	275	812	857	204	26	78·8	1,087
2,857	20	..	..	..	462	2,415	2,658	97	122	92·3	2,877
444	76	2	..	..	79	443	456	51	15	87·3	522
140	2	2	..	..	28	116	141	3	..	97·9	..
4,806	428	18	..	2	1,139	4,115	4,716	375	163	89·7	1,277
240	433	42	33	47	350	445	709	42	44	89·1	795
634	1,025	16	..	..	1,027	648	1,249	184	242	74·5	1,675
817	619	7	2	..	1,318	127	1,444	1	..	99·9	1,445
214	449	..	..	26	213	476	526	95	68	76·3	..
1,905	2,526	65	35	73	2,908	1,696	3,928	322	354	85·3	1,305
40	643	10	..	252	117	828	686	178	81	72·5	945
..	457	1	..	23	204	277	481	..	..	100·0	..
19,850	6,673	254	191	1,297	12,871	15,394	24,403	2,078	1,784	86·3	1,334

TABLE

VACCINATION UNDER

Table of Vaccination through the Agency of the Native Chiefs, arranged according for the

Number.	Divisions.	Stations.	Medical Officers.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.		
						1860.	Increase.	Decrease.
1	Southern Circle ..	Kolapoor, &c. ..	Asst. Surg. W. Peach	18	11,971	9,351	2,620	..
2	Northern Circle ..	Mahee and Rewa Kanta.	„ Rustomjee Byramjee .	23	24,216	22,888	1,328	..
3	Central Circle	Peint (Nassick)..	Sub-Asst.Surg. R. Spencer.	1	122	590	..	472
4	Southern Circle ..	Sawunt Waree ..	Asst. Surgeon W. Peach..	1	4,645	4,585	60	..
5	Kattywar	Rajcote	„ R. G. Lord.	21	16,122	13,234	2,888	..
6	Northern Circle ..	Bhooj	Mr. Suddashew Hemraj, G. M. C.	4	26	104	..	78
7	Southern Circle ..	Hooblee	Sub-Asst. Surgeon Wamon Wassoodeo.	1	921	141	780	..
			Total..	69	58,023	50,893	7,130	..

No. III.

NATIVE CHIEFS' AGENCY.

to the Divisions of Vaccination, and showing Details, as in Tables Nos. I. *and* II., *Year* 1861.

Total Number Vaccinated, arranged according to—													
Sex.		Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Average Number of persons Vaccinated by each Vaccinator.
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under One Year.	Above One Year.	Successful.	Unsuccessful.	Doubtful.		
6,252	5,719	10,724	747	21	..	479	3,342	8,629	11,075	540	356	92·5	665
12,548	11,668	20,932	1,571	..	2	1,711	9,577	14,639	20,829	1,915	1,472	86·0	1,052
54	68	122	..	..	..	..	47	75	68	32	22	55·7	122
2,432	2,213	4,381	106	158	..	..	796	3,849	3,997	310	338	86·0	4,645
8,663	7,459	12,919	3,171	..	..	32	5,045	11,077	14,648	826	648	90·8	767
15	11	5	21	..	..	..	1	25	21	..	5	80·7	6
461	460	204	699	1	..	17	267	654	711	151	59	77·1	921
30,425	27,598	49,287	6,315	180	2	2,239	19,075	38,948	51,349	3,774	2,900	88·4	841

TABLE

GENERAL ABSTRACT OF VACCINATION

DESIGNATION OF TABLES.	Total Number Vaccinated.	Compared with last Year.			Sex.	
		1860.	Increase.	Decrease.	Males.	Females.
No. 1, Vaccination under Superintendents	173,380	195,132	....	21,752	94,515	78,865
No. 2, Ditto under Civil Surgeons, &c.	28,265	28,408	....	143	15,471	12,794
No. 3, Ditto by the Native Chiefs' Agency	58,023	50,893	7,130	....	30,425	27,598
Total..	259,668	274,433	....	14,765	140,411	119,257

No. IV.

FOR THE YEAR 1861.

Total Number Vaccinated, arranged according to—										
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under One Year.	Above One Year.	Successful.	Unsuccessful.	Doubtful.	
114,142	50,718	2,125	602	5,793	54,698	118,682	161,069	6,384	5,027	93·4
19,850	6,673	254	191	1,297	12,871	15,394	24,403	2,078	1,784	86·3
49,287	6,315	180	2	2,239	19,075	38,948	51,349	3,774	2,000	88·4
183,279	63,706	2,559	795	9,329	86,644	173,024	237,721	12,236	9,711	91·5

TABLE OF AGES.

Vaccination in 1861, *arranged according to Ages, whether performed under or above One Year of Age.*

Establishments, &c.	Age.		Difference.		Total Vaccinated.
	Under One Year.	Above One Year.	Under.	Above.	
I. Superintendents	54,698	118,682	..	63,984	173,380
II. Civil Surgeons and others	12,871	15,394	..	2,523	28,265
III. Native Chiefs' Agency	19,075	38,948	..	19,873	58,023
Total..	86,644	173,024	..	86,380	259,668
I—*Superintendents.*					
Presidency Division	4,080	4,781	..	701	8,861
Central Circle	5,665	36,853	..	31,188	42,518
Southern Circle	5,541	19,850	..	14,309	25,391
Northern Circle	22,524	18,825	3,699	..	41,349
Sind Division	13,977	35,184	..	21,207	49,161
Kattywar Division	2,911	3,189	..	278	6,100
II.—*Civil Surgeons and others.*					
Tanna	58	198	..	140	256
Alibaugh	23	43	..	20	66
Bandora	18	72	..	54	90
Poona	636	1,117	..	481	1,753
Ahmednuggur	236	883	..	647	1,119
Satta	918	893	25	..	1,811
Sholapore	532	902	..	370	1,434
Dhoolia	600	202	398	..	802
Nassick	1,016	640	376	..	1,656
Mahableshwur	26	93	..	67	119
Ahmedabad	1,794	1,026	768	..	2,820
Kaira	363	157	206	..	520
Rajcote	516	607	..	91	1,123
Surat	911	960	..	4	1,871
Broach	856	685	171	..	1,541
Belgaum	295	329	..	34	624
Dharwar	275	812	..	537	1,087
Kolapoor	462	2,415	..	1,953	2,877
Rutnagherry	79	443	..	364	522
Vingorla	28	116	..	88	144
Kurrachee	350	445	..	95	795
Hydrabad	1,027	648	379	..	1,675
Shikarpoor	1,318	127	1,191	..	1,445
Sind Civil and Dispensary Hospitals	213	476	..	263	689
Aden	117	828	..	711	945
Bushire	204	277	..	73	481
III.—*Native Chiefs' Agency.*					
Kolapoor, &c.	3,342	8,629	..	5,287	11,971
Mahee and Rewa Kanta	9,577	14,639	..	5,062	24,216
Peint (Nassick)	47	75	..	28	122
Sawunt Waree	796	3,849	..	3,053	4,645
Rajcote	5,045	11,077	..	6,032	16,122
Bhooj	1	25	..	24	26
Hoobleé	267	654	..	387	921

EMPLOYMENT RETURN OF SUPERINTENDENTS OF VACCINATION FOR THE YEAR 1861.

CENTRAL CIRCLE.

Superintendent.—Assistant Surgeon F. H. PLUMPTRE.

MONTHS.	Number of Stations visited.	Distance travelled.	Number of Travelling Days.	Number of Children inspected.	SUMMARY OF REMARKS.
January	9	88 Miles.	8	80	6 Villages visited and inspected.
February	10	113 do.	9	276	13 Do. do.
March	9	105 do.	9	216	13 Do. do.
April	5	135 do.	4	229	8 Do. do.
May	2	55 do.	2	..	On leave from 1st to 14th June; 23rd at Poorundhur.
June	..	..	..	..	Monsoon, and passing Examination.
July	..	..	..	..	
August	..	..	..	..	
September ..	..	..	..	..	
October	2	22 do.	1	260	6 Villages inspected.
November ..	7	73 do.	6	230	7 Do. do.
December ..	1	11½ do.	3	168	6 Villages inspected by Assistant Surgeon Asher from 10th.
Total..	45	602½ Miles.	42	1,459	

SOUTHERN CIRCLE.

Superintendent.—Assistant Surgeon W. PEACH, M.D.

MONTHS.	Number of Stations visited.	Distance travelled.	Number of Travelling Days.	Number of Children inspected.	SUMMARY OF REMARKS.
January	10	95 Miles.	12	644	21 Villages inspected.
February	12	144 do.	11	257	6 Do. do.
March	16	143 do.	13	17	
April.....	13	139 do.	13	120	
May	18	180 do.	17	250	
June.....	..	..	..	..	Monsoon.
July	..	..	..	..	
August	..	..	..	..	
September ..	..	..	..	..	
October	..	..	..	..	
November ..	6	99 do.	10	642	Return by Deputy Superintendent of Vaccination, Sub-Assistant Surgeon Wamon Wassoodeo.
December ..	..	..	..	..	
Total..	75	800 Miles.	76	1,930	

SIND DIVISION.

Superintendent.—Assistant Surgeon T. E. P. MARTIN.

MONTHS.	Number of Stations visited.	Distance travelled.	Number of Travelling Days.	Number of Children inspected.	SUMMARY OF REMARKS.
January	12	140 Miles.	12	1,020	20 Villages visited between the Stations.
February ..	9	103 do.	9	1,100	75 Do. do. do.
March	12	141 do.	12	1,600	85 Do. do. do.
April	14	186 do.	14	3,000	108 Do. do. do.
May	8	84 do.	8	100	
June	18	162 do.	18	625	51 Do. do. do.
July	12	96 do.	12	567	23 Do. do. do.
August ...	..	..	..	85	Stationary at Tattee, on account of the inundation.
September .	1	..	3	65	Do. do. do.
October ...	9	122 do.	9	370	
November ..	17	226 do.	17	1,120	89 Villages visited between the Stations.
December ..	15	197 do.	15	1,522	99 Do. do. do.
Total.	127	1,457 Miles.	129	11,174	548 Villages visited between the Stations.

NORTHERN CIRCLE.

Superintendent.—Assistant Surgeon RUSTOMJEE BYRAMJEE.

MONTHS.	Number of Stations visited.	Distance travelled.	Number of Travelling Days.	Number of Children inspected.	SUMMARY OF REMARKS.
January	..	..	..	..	Office in charge of Civil Surgeon, Ahmedabad.
February	..	..	..	..	
March	..	..	..	..	
April	..	..	..	..	
May	6	57 Miles.	6	43	
June	..	..	..	..	Monsoon.
July	..	..	..	..	
August	..	..	..	..	
September ..	..	..	..	..	
October	6	47 do.	6	173	
November ..	9	75 do.	9	131	
December ..	7	49 do.	6	219	
Total ..	28	228 Miles.	27	566	

KATTYWAR CIRCLE.

Superintendent.—Assistant Surgeon R. G. LORD.

MONTHS.	Number of Stations visited.	Distance travelled.	Number of Travelling Days.	Number of Children inspected.	SUMMARY OF REMARKS.
January ...	8	144 Miles.	13	150	
February	5	74 do.	5	..	
March	20	206 do.	19	235	
April	13	59 do.	11	33	
May	3	24 do.	2	20	
June.....	9	98 do.	8	44	
July	..	..	..	..	Monsoon.
August	..	..	..	..	
September ..	..	..	..	..	
October	..	..	..	..	Office in charge of Acting Civil Surgeon.
November ..	..	..	..	..	
December ..	..	..	..	..	
Total..	58	605 Miles.	58	482	

No. 791 of 1862.

General Department,

Bombay Castle 7th May 1862.

To the Principal Inspector General, Medical Department.

Civil Paymaster.

Copy of the Resolution passed by Government on a Letter from the Principal Inspector General Medical Department, No. 712, *dated 9th April* 1862, *forwarding Extracts from the Reports of Superintendents of Vaccination for the past year* 1861.

The Governor in Council regrets to learn that there has been a falling off in the number of vaccinations during the year under report to the extent of 14,000 compared with the number of vaccinations performed during the preceding year. Of the decrease in question more than one-half, or 10,407 cases, took place in the Sind Circle, which is ascribed chiefly to sickness among the Vaccinators, as also to changes in the establishment. There was also a decrease of 10,513 cases in the Southern Circle.

2. The Governor in Council is of opinion that the scheme, which was sanctioned by the Resolution of the 20th November 1860, No. 2250, will in time prove to be well calculated to promote the efficiency of the Department, by affording to each Superintendent the assistance of two Sub-Assistant Surgeons as deputies to aid him in supervising the Native Vaccinators. Its apparent want of success seems at first to be owing solely to the circumstance that the number of Native Medical Graduates is as yet insufficient to make these appointments as profitable as the private practice which attracts our graduates to establish themselves in the principal towns in this Presidency.

3. This in itself is a gratifying fact. It satisfactorily denotes the benefit which the people are deriving from the education imparted at the Grant Medical College. It shows that the fear that the profession of the European system of Medicine would not sufficiently command the confidence of the people to provide a remunerative field of practice to the graduates of the College has proved unfounded, and that on the contrary there is a very encouraging field open to them.

4. The Principal Inspector General reports in paragraph 11 that only one of the Sub-Assistant Surgeons who had been appointed to the Department remains.

5. It is so essential to the due discharge of their duties by these assistants that nothing should be opposed to their being active in their movements, that the Governor in Council considers it would be proper to assign to them a travelling allowance, and is therefore pleased to sanction their drawing, whilst moving through their Circles, a daily allowance of Rs. 1½ per diem, if the charge can be provided for from the sum estimated for in the Budget.

6. The percentage of successful operations is reported to amount to 91·5 per centum in the Mofussil, whilst in the Bombay Circle the percentage is only 81. The Governor in Council fears that these figures indicate that the returns of the Vaccinators in the Mofussil, which cannot be so well tested as the returns of the Vaccinators in Bombay, are not so trustworthy. There is no reason why the operations in the Mofussil should be so much more successful than in Bombay.

7. The question of admitting Vaccinators to the benefits of the Pension Rules is under reference to the Government of India, whose reply, as soon as received, will be communicated to the Principal Inspector General.

A. D. ROBERTSON,
Acting Chief Secretary to Government.

BOMBAY: PRINTED AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR THE YEAR 1862

Bombay:
PRINTED FOR GOVERNMENT
AT THE
EDUCATION SOCIETY'S PRESS, BYCULLA.

1863.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR 1862.

No. 758 OF 1863.

From The PRINCIPAL INSPECTOR GENERAL, Medical Department,

To the SECRETARY to GOVERNMENT, General Department.

Bombay, 31*st March*, 1863.

SIR,—I have the honor to submit to His Excellency the Governor in Council, the Annual Report on Vaccination for 1862. It consists,

1st,—of a statement, by myself, of the working of the Department during the year;

2ndly,—of extracts from the reports by the Superintendents of Vaccination and by Civil Surgeons, and

3rdly,—of tabulated figured results.

2. With the exception of Bombay itself, and of the provinces of Sind and Kattiawar, each of the Circles of Vaccination was slightly changed in extent towards the close of the year, and one additional Circle was formed. Thus the district of North Canara, which was recently transferred from the Madras to the Bombay Presidency, was added to the Southern Circle; and the Collectorate of Sholapoor was removed from that Circle to the Central one. Again, the Punch Mahal territory, recently ceded by his Highness Scindia, and the States of the Native Chiefs in the Rewa Kanta, were separated from the Northern Circle, and placed under the superintendence of the Medical Officer of the Gujerat Bheel Corps.

3. Consequent upon these changes, the Circles now stand as follows:—

I.—The Northern Circle, consisting of the Collectorates of Ahmedabad, Kaira, and Surat, the Sub-Collectorate of Broach, and the territories of the Chiefs in the Mahee Kanta, and of Rajpeepla and Pahlunpoor.

II.—The Central Circle, consisting of the Collectorates of Tanna, Kandeish, Poona, Ahmednuggur, and Sholapoor, and of the Peint State.

III.—The Southern Circle, consisting of the Collectorates of Sattara, Rutnagherry, Belgaum, Dharwar, and North Canara, of the Kolapoor and Sawunt Waree States, and of the territories of the Jagheerdars in the Southern Mahratta country.

IV.—The Rewa Kanta Circle, consisting of the territories of the Chiefs in the Rewa Kanta, and of the British Punch Mahal territory.

V.—The Kattiawar Circle.

VI.—The Sind ditto.

VII.—The Presidency ditto.

4. The arrangement with regard to the Rewa Kanta is solely due to the advocacy of the Political Agent, Major Buckle. He represented that small-pox was one of the most prevalent diseases in those districts, and stated his conviction that good operators and good supervision would save life to such an extent, that in fifteen years there would be a material increase in the amount of the population.

5. The arrangement only came into effect in December. The returns for last year are consequently included in those of the Northern Circle. For the current year they will of course stand by themselves. The establishment consists of eleven Vaccinators. Four are stationed in the Punch Mahals and are paid by Government, while seven are employed by Native Chiefs in the Rewa Kanta, under the Political Agent.

6. Vaccination in those districts has not hitherto been in a satisfactory state. It was almost impossible for the Superintendent of the Northern Circle to exercise an adequate supervision over so large a tract of country, in addition to the remainder of his very extensive range. He, moreover, represented that the prejudices against Vaccination in the Rewa Kanta were exceedingly strong. It is to be hoped, however, that under the fostering care of the Political Agent, matters will improve; and that as the Medical Officer, now entrusted with the duty, lives within the province, his personal influence and frequent tours will have the effect of overcoming all obstacles to its general diffusion.

7. With regard to the arrangements in North Canara, I have to report that on the transfer, last year, of that district to this Presidency, it appeared to me, after making enquiry into the subject, that the state of Vaccination was by no means satisfactory. It was pronounced, indeed, by Dr. Ross, the Civil Surgeon at Honore, a Madras Medical Officer, to be "radically bad."

8. There were seven vaccinators employed, but the operations were insignificant in number for so large a district. There was no mode of verifying the accuracy of returns, beyond obtaining the signature of the Tahsildars of talooks, unless the Civil Surgeon himself was able, now and then, to visit some place where a vaccinator had recently been at work, and thus to test personally the actual results with the returns. The Civil Surgeon had little or no control over the vaccinators, all power being placed in the hands of the Collector.

9. There appeared, moreover, to be difficulties to contend with, connected with the feelings and prejudices of the inhabitants themselves. It was represented by Dr. Williams, the predecessor of the present Civil Surgeon, not only that the people generally were most unfavorably disposed towards Vaccination, but that the Brahmins, as a body, fostered the most absurd traditions in favour of small-pox, and threw every obstacle in their power in the way of vaccinators. It was even said that many of the Native officials might as reasonably be expected to forward the views of Missionaries, as to assist a vaccinator.

10. Dr. Williams was requested by a Native official, holding a high position, to treat his children for fever. A few questions elicited the fact that they had been ill ten days. On asking why he had not applied earlier, he replied that he had hoped they were going to have small-pox, and that his caste custom would not permit of any medicine being given in that disease. On Dr. Williams speaking to him about Vaccination, he replied that "his caste liked to have small-pox." Yet this man was said to be an intelligent person compared with many around him.

11. It was further reported that so prevalent and fatal was small-pox, that hundreds of the population died of it every year.

12. In this state of matters I suggested to Government, in July, that existing arrangements should at once be put an end to, and that North Canara should be brought under the Vaccination system of this Presidency, in the same manner as all the other Collectorates. Government were pleased to approve of this course. The district was accordingly added to the Southern Circle, and placed under the management of its Superintendent.

13. As this arrangement only came into force towards the close of the year, the returns from North Canara will not be included in this report.

14. Several changes took place during the year among the Superintendents. Assistant Surgeon Dick succeeded Assistant Surgeon Rustomjee Byramjee in the Northern Circle, in February; and Assistant Surgeon Beatty, on his return from Europe in March, replaced Assistant Surgeon Plumptre in the Central Circle. Assistant Surgeon Asher succeeded Assistant Surgeon Peach in the Southern Circle; and Assistant Surgeon Butler, Dr. Lord, in the Kattiawar Circle.

15. I now proceed to state the general results of the year. The total number of Vaccinations was 244,681, being 14,987 less than in 1861. This cannot be regarded as otherwise than unsatisfactory. Some Superintendents attribute the diminished numbers to the prejudices and indifference of the natives,—to sickness and indolence on the part of some of the vaccinators,—to want of support from native officials,—and to increasing difficulty in obtaining the assistance of peons in the districts.

16. But with the exception of the last-mentioned cause,—to which I will advert presently,—the state of matters described has always been in existence, more or less, even when Vaccination was progressing favourably. It, therefore, cannot be viewed as now specially explaining the falling off in numbers.

17. It would at present be premature to hazard an opinion, whether or not the diminution is in any way connected with the reorganization of the Department, which took place in 1861, consequent upon the Notification by Government, dated 24th July of that year. The experience of another year or two will be required, before we can be put in possession of sufficient data for determining that question.

18. It should be borne in mind, however, that in accordance with that Notification, the amount of European agency was materially diminished. Two Divisions of Vaccination were absorbed into others, and the services of two Assistant Surgeons, who were the Superintendents, were placed at the disposal of Army head quarters.

19. With the view of compensating for this loss, it was intended by Government that each of the three most extensive Circles should be provided with two native sub-assistant surgeons, as Deputy Superintendents. Their chief duties were to assist the Superintendents in the inspection of the work of native vaccinators,—to explain to the inhabitants of the districts, in which they might be employed, the objects of Vaccination,—and to encourage its diffusion by persuasion, and by all other legitimate means.

20. I mentioned in my last report, however, that with one exception, sub-assistant surgeons had declined these appointments, even though carrying with them an increased rate of pay. The main objections of some were based on the necessity of constant travelling, and on the expense thereby involved, while to others the duty was distasteful as withdrawing them from the practice of their profession.

21. With the view of obviating the objection connected with expense, Government were pleased, in May last, to sanction a travelling allowance for each Deputy Superintendent. To provide for this increased expenditure, the number of appointments was reduced from six to four.

22. But even with this additional inducement to enter the Department, it remains distasteful and unpopular. Subsequent to the announcement of the

grant of travelling allowance, and with the view of filling up vacancies amongst the Deputy Superintendents, I took measures in August to ascertain how many sub-assistant surgeons, then employed by Government in different parts of the Mofussil and in Sind, would voluntarily enter the Department. The result showed that ten out of twelve declined. The two, who volunteered, were Sub-Assistant Surgeons Cooverjee Dorabjee and Wamon Wassoodeo. The former was attached to the Southern, and the latter to the Central Circle.

23. In justice to my predecessor, Dr. Rooke, I think it should be placed on record that the reduction in the number of European Superintendents was not made by Government on his recommendation. On the contrary, Dr Rooke maintained that to diminish the amount of European agency was to impair the efficiency of the Department. At the date of my last report, I had too recently assumed charge of my present office, to feel justified in expressing an opinion on the point, but the knowledge acquired by a twelve-months' experience of the working of the Department, enables, nay even compels, me to express my concurrence in Dr. Rooke's view.

24. I fully admit that much may be advanced in support of the plan, which was adopted, of introducing educated native agency. The intimate intercourse with the people, of a native Government servant holding a certain position, whose sole duty is to encourage the diffusion of Vaccination,—his familiarity with their feelings, prejudices, and customs,—his thorough acquaintance with their language,—and the opportunity of having returns verified by a perfectly trustworthy person, might well lead to the expectation that great benefit would result from such agency, in smoothing difficulties and in overcoming obstacles.

25. I sincerely trust that such expectation may yet be realised, but I must confess, I much doubt whether these advantages can compensate for the loss of European energy and activity, and for the further loss of those beneficial results arising from the prestige, which in the Mofussil is always attached to a European functionary.

26. Neither can I conceal from myself that the result, hitherto, has not been encouraging. I have already mentioned that the Department is disliked; and it cannot be denied, that in the Northern Circle,—the only one in which the new system was in operation throughout the year,—there has been a diminution, instead of an increase, in the number vaccinated.

27. The result in one Circle, however, and for so limited a period, is quite inconclusive. The system is entitled to a fair and lengthened trial. It nevertheless behoves the Deputy Superintendents to exert themselves to the utmost, if they desire to prove that their admission into the Department is calculated to prove beneficial to it.

28. The diminution in the number of Vaccinations was not confined to one or two Circles, but was general throughout all, with the sole exception

of the Southern, in which,—owing mainly, I believe, to the untiring energy and great personal activity of Dr. Asher,—there was an increase of more than 5,000. He travelled about 1,100 miles, visited nearly 200 towns and villages, and personally inspected upwards of 3,500 children.

29. Dr. Martin, however, of the Sind Circle, did still more. He travelled about 1,300 miles, visited nearly 500 towns and villages, and personally inspected upwards of 8,000 children. When Superintendents exert themselves in this manner, there is seldom much want of activity or painstaking among their subordinates.

30. In no other Circle was there a corresponding amount of exertion on the part of the Superintendent. It is but fair, however, to Dr. Dick, of the Northern Circle, to say that he only joined the Department in February, and that he was detained at Surat for some weeks in October and November, owing to the absence of the Civil Surgeon on sick certificate. I trust no Superintendent will ever again be detained a single day from his districts, or be put on any additional duty, except under very emergent circumstances. To do so, is seriously to injure the Department.

31. I ought also to explain that Dr. Butler, of the Kattiawar Circle, only joined the Department in April, and that owing to the transfer of his predecessor to Mahableshwur, the active work of superintendence was suspended during the previous months of the year.

32. It should further be mentioned that Dr. Beatty, of the Central Circle, only returned from Europe and assumed charge late in March, and that for some weeks towards the close of the year, he was incapacitated for work by illness.

33. I do trust, however, and fully expect, that the "employment returns" of the present year will show that each Superintendent has been exerting himself to the same extent as Dr. Asher, or Dr. Martin. Nor shall I feel satisfied unless this proves to be the case. For the purpose of stimulating the vaccinators to increased exertion,—of verifying their returns by carefully scrutinizing the work they have performed,—and of explaining to communities the nature and value of the prophylactic,—a Superintendent ought to be constantly on the move during the working portion of the year.

34. But though, judged by the test of numbers, the results of the year cannot be pronounced satisfactory, there are, nevertheless, one or two facts which seem to prove that Vaccination is gradually making its way into the favour of the people, and apparently obtaining even a hold upon their affections.

35. One of these is the increasing proportion of Vaccinations in the *infantile* population,—a point both of interest and importance. The returns for 1857 showed that 70 per cent. of Vaccinations were in persons above one year of age, and only 30 below it. Two years later, the returns from the Deccan Division showed that only 10 per cent. were in children below that age. It was clearly

evident that native parents at that time had a very strong aversion to Vaccination during infancy. The returns for the past year show, on the contrary, that out of 244,681 Vaccinations, no less than 80,177 were in children under one year of age. In other words, every third person was vaccinated,—as all people ought to be,—during infancy.

36. The relative proportion varies very much in different localities. Thus while the returns from the Deccan and Southern Mahratta country are conspicuous, above all others, for a large majority of operations in persons above one year of age, those from the Collectorates in Gujerat show that out of 39,000 Vaccinations, 21,000 were in children below that age. In other words, 52 per cent. of operations were performed during infancy.

37. Nor is this gratifying fact, of a growing increase of operations in the infantile population, confined to the returns from the Superintendents. It is still more markedly shown in those from the Civil Surgeons at Surat, Ahmedabad, and Shikarpoor. At the two last-mentioned stations, especially, a very large majority of Vaccinations was in infants.

38. As remarked by Dr. Dick, this state of matters seems to prove that prejudices are subsiding, and indifference diminishing. Constituted, indeed, as human nature is, it could not be otherwise in the face of facts which occur every now and then, and convincingly prove to the people the enormous value of the prophylactic.

39. In one of Dr. Beatty's reports, for instance, it was stated that during a severe outbreak of small-pox in the Rutnagherry Collectorate, in 1858, the returns from the Unjunwel and Severndroog talookas were very striking, in showing the difference in the ratio of mortality between the unvaccinated and the vaccinated. In the former, 57 children, none of whom had been vaccinated, were attacked with the disease, and 17 per cent. died. In the latter, there were 177 people who had previously been vaccinated, and not one death took place among them.

40. Again, it was mentioned in one of Dr. Martin's reports, that in 1859 small-pox prevailed in a very severe form in a talook of the Jerruck districts. The people were greatly alarmed. It was a happy circumstance in the interests of Vaccination, that in two villages, where the disease was most fatal, there were some children who had been previously vaccinated, and not one was attacked. Other children were seized in all the surrounding houses, but these escaped. The effect was strikingly beneficial, for this practical proof of the value of Vaccination at once removed prejudices, and all classes eagerly sought its protective power.

41. At the same time it cannot be denied, that in many places, there lurks a vague fear and distrust of its permanent efficacy. Time alone can, of course, remove this feeling. It is also unhappily apparent, that the very class whose influence, if exerted in behalf of Vaccination, would readily obtain for it

universal acceptance, is, as a body, opposed to its introduction. I allude to Brahmins. I have already given the testimony of the medical officer of North Canara on this point, and it closely corresponds with evidence from other quarters. Dr. Asher, for instance, states that "Brahmins are pre-eminent in hardness of belief and in opposition."

42. This feeling of distrust occasionally deepens to positive aversion; and, in one instance, it extended even to open opposition. Dr. Dick mentions that in the southern districts of the Surat Collectorate, the prejudices are so strong that recently some inhabitants of a village assembled in a riotous manner and drove the vaccinator out of it. No similar occurence, however, has taken place elsewhere; and Dr. Dick, while mentioning it, states at the same time that the people generally seem to appreciate the benefits of Vaccination, and that he has often heard them express their gratitude to Government for disseminating so great a blessing.

43. With regard to sex—

132,245 were males, and
112,436 „ females.

This relative proportion is nearly similar in each Circle, and varies but little from that of previous years. Dr. Wyllie, the Civil Surgeon of Ahmedabad, is inclined to interpret the marked disproportion of the sexes, as expressive of a higher solicitude, on the part of parents, for the safety of their male than of their female children.

44. The castes were as follows:—

Hindoos	177,423
Mussulmans	56,707
Christians	1,416
Parsees	669
Other Castes	8,466

It has often been a matter of surprise, that amongst such an intelligent people as the Parsees, so very few appear to avail themselves of the advantages of Vaccination.

45. Out of the total number vaccinated, 10 per cent. of the operations were unsuccessful. Thus, out of 244,681 Vaccinations, 221,275 were reported as successful. I say *reported* as successful, because facts come to light every now and then, which throw a shade of suspicion over the perfect trustworthiness of the returns received by Superintendents from their native vaccinators, and I by no means wish to convey an impression that the Department is a model of truthfulness.

46. That the returns are in the main correct, there is good reason to believe; but, notwithstanding the most strenuous endeavours on the part of Superintendents to verify their accuracy by personal inspection, and by other means, I much fear there is occasional falsification. It should therefore be understood

that the figures are to be regarded, not in the light of perfect accuracy, but merely as an approximation to it.

47. To expect, indeed, perfect trustworthiness in men on the scanty salary of native vaccinators,—men, moreover, who are stamped as unworthy of receiving pensions, when unfitted by age for further work,—would be to expect what in the nature of things is an impossibility. If efforts are to be made to extend the usefulness of the Department, commensurate with its great importance, it is evident that the prospects of these men must be improved. The privilege of admission to the benefit of the pension rules must be conceded, and an inducement thus held out to a better class of men to enter the Department.

48. Government, however, have fully recognized this necessity, and have been pleased already to bring the subject to the notice of the Supreme Government. It is, therefore, unnecessary to add another word.

49. I have now to make a few brief remarks on such portions of the reports by one or two of the Superintendents as seem to require special notice, and I will first allude to the report from the Southern Circle.

50. I have already mentioned that the general results of the year in this Circle were very satisfactory. I must explain, however, that this remark applies mainly to the work done in the British territories, for with the marked exception of the Sawunt Waree State, it was by no means the case in the territories of the native Chiefs.

51. This want of progress is attributed by the Superintendent to the very little interest evinced by the Chiefs in the subject. It is said they cannot comprehend the advantages that would result from the general diffusion of Vaccination. They, therefore, give little thought, and no care, to the matter, and though profuse in promises, they take no steps to overcome difficulties and remove impediments.

52. Dr. Asher suggests, as a means of changing this state of things for the better, that the Jaghirdars should be urged by the political authorities to evince more interest in the subject,—to exact greater diligence from their vaccinators,—and to teach a wholesome lesson to their dependents, and to the general community, by receiving Vaccination readily in their own families.

53. In the event of this course failing to gain the object in view, he thinks it might hereafter become a question, whether the Jaghir vaccinators should not be brought more under the direct control of the Superintendent, by Government amalgamating the Jaghirdar establishment with its own, on receiving from the Chiefs contributions to a vaccinating fund, for the express purpose of undertaking to spread Vaccination in their territories.

54. In throwing out this suggestion, which seems well worthy of consideration, the Superintendent seems to think that as the Chiefs are totally indifferent in the matter, and that as they pay a vaccinator, not from any inherent wish for his services, but merely as a piece of policy, they would not object to

such an arrangement, or oppose it on the ground of its being an infringement on their prerogatives or dignity.

55. Greater progress appears to be making in the Rutnagherry Collectorate and in the Sawunt Waree State, than elsewhere in the Circle. The Superintendent attributes this, in the former case, to the circumstance, that the inhabitants of the Concan are more intelligent and open to persuasion than their fellow-countrymen above the ghats; and, in the latter, mainly to the fact of the Political Agent having long taken a warm interest in the subject.

56. As a proof of the extent to which Vaccination has been carried in Sawunt Waree,—and of the marked benefit which has been derived,—the Superintendent mentions that out of a large number of children examined in the schools, he found them almost universally protected by Vaccination.

57. On applying the same test to the schools in the Belgaum, Dharwar, and Sattara Collectorates, he found, on the contrary, that for one boy protected by Vaccination, half a dozen bore on their faces unmistakable evidence of having suffered from small-pox, thus clearly proving that Vaccination was far from being in so advanced a state.

58. I regret to record that Dr. Asher has recently left the Department. I must beg to be allowed to offer him my best acknowledgments for the warm interest he has taken in promoting its success, and at the same time, to express the high opinion I entertain of the ability and judgment which have characterized his proceedings.

59. Happily for the interests of the Department, he is succeeded by an officer who is intimately acquainted with its duties and requirements. Assistant Surgeon Plumptre served for some time as Superintendent under my direct control, when I was Deputy Inspector General of Hospitals in the Poona division of the Army.

60. In the Sind Circle, the Superintendent points out that two important measures are urgently required to extend the benefits of Vaccination:—

1st,—an additional number of vaccinators to cover the immense area of the Province; and,

2nd,—an arrangement to assist more effectually in sending vaccinated children from place to place to keep up the supply of lymph.

61. Dr. Martin urges,—what is now generally admitted on all hands,—that no extensive operations can be depended on, unless the lymph be transmitted from arm to arm. He states that he has repeatedly tried both crusts and glasses, and has found them unsatisfactory. He further points out,—what has often been noticed by others,—that one great objection to the use of dry, instead of fluid, matter, is that the resulting work is uncertain and inferior.

62. It is a remark frequently made by every Superintendent, that parents object to having their children removed for vaccinating purposes from their

own villages. Dr. Martin states, however, that in Sind it is a mere money difficulty, and that parents would not object, provided they were paid for it.

63. He then points out that the sum sanctioned for this purpose,—ten rupees a year for each vaccinator,—is wholly inadequate; and he recommends, for sanction, a remedy which was suggested to him by a Deputy Collector who takes an active interest in the subject. I beg to quote Dr. Martin's words:—

"It appears that Deputy Collectors have the control of a certain sum of money to be disbursed discretionally for the benefit of the District. It was suggested that the vaccinator might make out a bill,—signed by the parents or guardian of the child and the head man of the village,—showing that a certain sum had been received from him. This sum would be paid by the Deputy Collector out of funds at his disposal. Could such a plan be generally adopted, the cause of Vaccination would be strengthened, and no possible hardship could accrue to the guardians of the children required for Vaccination purposes."

64. I beg to recommend both these measures for the favourable consideration of the Commissioner in Sind, and of Government.

65. I regret having to record that Dr. Martin, after six years of successful labour in Sind, has recently vacated his post. No Superintendent ever effected a larger amount of good. His loss to the province will be great. During these six years, the annual average number of Vaccinations was 48,000. This statement affords strong evidence of untiring energy and of marked success, more especially on bearing in mind that in 1856,—the year previous to Dr. Martin's assuming charge,—the number was only 15,000. By the excellence of his arrangements,—his energy of character,—his tact and judgment in intercourse with the people,—and his painstaking devotion to his work, he has brought Vaccination to a high point of success. I beg to offer him my best acknowledgments, and to commend him to the favour of Government.

66. It is to be hoped that his successor, Assistant Surgeon Pinkerton, will follow in Dr. Martin's steps with equal earnestness, activity, and zeal.

67. Before leaving the subject of Vaccination in Sind, it should be mentioned that, in consequence of the great practical interest which is taken in it by Dr. Ritchie, the Deputy Inspector General of Hospitals, the dispensaries throughout the province are becoming of great value in furthering its dissemination.

68. In a previous part of this report, I mentioned that some of the Superintendents attributed the diminished amount of work to the increasing difficulty which is experienced in obtaining for vaccinators the assistance of peons in the districts, and I stated my intention of adverting to the subject. This I now propose to do, for I consider it one of very great importance to the efficiency of the Department.

69. For the purpose of enabling the question to be fully and fairly viewed, I must premise that by Clause 19 of the Vaccination Rules, sanctioned by Government, the Civil authorities in the districts are authorized to afford the occasional aid of peons, and I have reason to believe that until recently such aid was freely given.

70. Complaints, however, have reached me from the Superintendents, and more especially from those of the Northern and Central Circles, that the assistance of peons has been to a considerable extent withheld. The reason assigned for this is the recent reduction in the revenue establishment,—the diminished number of peons being merely sufficient for the discharge of the revenue duties for which they are entertained. If so, it would no doubt be unreasonable to expect that the revenue establishment, which has been fixed in accordance with the requirements of revenue duty, should be employed in another department.

71. As an illustration of these complaints, I may mention that Dr. Beatty reported, some time ago, that until recently, each vaccinator in the Ahmednuggur Collectorate had been allowed the aid of a peon to assist in collecting children for Vaccination, and subsequently for inspection; but that in consequence of the reduction in the establishment, such aid had been withheld, and that it had become, in consequence, almost impossible to carry on work.

72. This withdrawal of peons by the Collector was no doubt forced upon him by the circumstances just mentioned. I trust, therefore, I may not be understood as making any reflection upon him. On the contrary, my best acknowledgments are justly due to the Collector for his obliging readiness on all occasions to aid the Department, for I have reason to know that he has always given instructions to district officers to afford every assistance in their power, short of attaching peons to vaccinators.

73. It is, I am aware asserted by many district officers, that whenever a peon is withdrawn from a vaccinator, he invariably reports difficulties in order to get the peon returned. I have no doubt there may be some truth in this. I, therefore, urged Dr. Beatty to inculcate upon his establishment the necessity of exerting greater self-reliance and energy, and of depending less on native officials. I, at the same time, begged him to warn each vaccinator, that he would not be considered fit for his post, unless he proved himself able to meet and overcome difficulties by personal influence and persuasion.

74. I mention this for the purpose of showing that I have by no means lent too ready an ear to complaints of this nature. I am perfectly convinced, however, that peons are essentially necessary,—that the subject stands at present on a most unsatisfactory footing,—and that the interests of the Department require that the requisite aid should be afforded. My conviction of this necessity is the stronger from having been assured, especially by Dr. Dick,

that the complaints of vaccinators come chiefly from the best men in the Department, and not from the worst.

75. That the reasons for this necessity may be clearly understood, I beg to explain,—on the united testimony of all Superintendents,—that it seems to be almost impossible for a vaccinator, on arriving at a town or village, to collect children for Vaccination, and subsequently for inspection, if unaided. They represent that a peon is indispensably necessary for this purpose. Sent on a day in advance, and in communication with the native officials, he warns the people to have their children collected at a certain place, and at an appointed hour. Without such aid, this cannot be done, at all events efficiently, and much time is lost.

76. Nor is this their only value. The presence of a peon is an unmistakable sign to the eye of a native, that Vaccination has the approval and sanction of Government. Thus a certain amount of moral support is afforded, which is of essential importance to its further extension. I am, moreover, assured, that the presence of a peon imparts confidence to the people, rather than anything approaching intimidation.

77. Under all these circumstances, I beg most strongly to recommend that Government will sanction the entertainment of one peon for every vaccinator, employed by each Superintendent in British territory. The total number required would be 125, that being the number of vaccinators. They should be attached permanently to the Department, and the expense charged against Vaccination. I should anticipate, as the result, a great development and extension of the system. Failing in obtaining such result, the peons might be removed. Looking upon small-pox as being, under certain conditions, a preventible disease, I would urge the importance of making increased efforts to render the protective system of Vaccination more efficient and complete.

78. The loss of life throughout India from the ravages of this dire disease cannot, in the absence of accurate registration, be computed. That it annually extends, however, to untold thousands, there cannot be a doubt. Putting aside all the higher considerations involved in a question of such deep interest, and viewing it solely on the low grounds of expediency, it is manifest that the beneficial results arising from the mere saving of life would repay a hundredfold, hereafter, the outlay of the present moment; for the increasing demand on all sides for labourers shows the increasing value of human life and labour.

79. The time is no doubt very far distant,—owing to political and many other considerations,—at which, circumstances will admit of making Vaccination compulsory. Neither, I fear, is the day near at hand, in which its value will be so fully appreciated by the mass of the people, as to enable native practitioners to obtain a livelihood by engaging in its practice, or even to induce native municipal authorities to bear the expense of diffusing it. Still, these two latter objects ought to be kept constantly in view, for Vaccination will only be ad-

vanced to a sound and healthy condition, when it will be able to dispense with pecuniary assistance from the State.

80. Yet, as the objects of municipal taxation embrace, or ought to embrace, all questions connected with the preservation of the public health,—of which Vaccination is an important branch,—I do not quite understand why a portion of such funds should not be devoted to its dissemination.

81. I trust it will not be regarded as utopian, if I venture to express my expectation that the day is approaching, in which educated "Young India" will fully recognize the vast value of Vaccination, and will earnestly strive to diffuse its blessings among their fellow-countrymen, by making known their belief in every quarter of the land. They would, by such a course, not only give a great practical proof of the good effects resulting from education, but they would very materially assist in securing the two objects, which I have just said should be kept constantly in view.

82. There was but very little small-pox during the year in Bombay, or in the province of Kattiawar. It appeared however to some extent in other districts. During the earlier months it prevailed in an epidemic form in some parts of Sind, and in nearly all the Collectorates of the Southern Circle, more especially in Belgaum and Dharwar. Again, during the hot season it prevailed in parts of the Northern and Central Circles, especially in some of the Broach districts, and in Cambay, Dhundooka, and Angria's Colaba, but not to a great extent, nor in a severe form.

83. Wherever it made its appearance, active measures were immediately adopted by the Superintendents and their establishments, to arrest its progress. It is usually observed that, under such circumstances, prejudices are lost sight of for a time. The people are roused for a moment to a sense of danger, and cordially welcome Vaccination. The Deputy Inspector General of Hospitals in the Southern Mahratta country mentions, for instance, that some months ago a village in the Rutnagherry Collectorate, which had refused Vaccination, was severely afflicted with small-pox, and that the inhabitants then eagerly sought protection.

84. Testimony to the same effect is afforded by nearly all the Superintendents, as well as by Civil Surgeons. There are exceptions however. Dr. Beatty, for instance, states as the result of his experience, that during the prevalence of small-pox as an epidemic, natives are most averse to Vaccination; that they look upon the disease as an infliction sent by their gods, and show very great reluctance to any interference with the dispensation.

85. The practice of inoculation is gradually disappearing from nearly every part of this Presidency, excepting Sind. In Bombay itself, it has long been unknown. In the Southern Circle not a case came to light during the year. In the Central Circle one occurred in the Tanna Zilla. The operator was tried before the Deputy Collector under the new Penal Code, which provides against

the continuance of the practice. The man pleaded ignorance, and was dismissed with a warning. An instance also occurred in the Northern Circle at Bulsar. The Police interfered, and the circumstance was reported to the Magistrate by the Superintendent.

86. In Sind, however, inoculation appears to be still carried on to a considerable extent, and the Superintendent attributes to this mischievous practice, the prevalence of small-pox in various localities. He fears there is no hope of putting it down, except through the intervention of the Magistrate.

87. The character of the vaccine lymph has been well reported on by all the Superintendents and Civil Surgeons, except at the Presidency itself, where there was considerable deterioration during the monsoon, attributable apparently to the hot and moist condition of the atmosphere.

88. It deteriorated, indeed, for a time, to so great an extent, that the Superintendent experienced some difficulty in keeping up a supply. Government are aware that, for the purpose of guarding against the inconvenience resulting from too limited a supply of lymph, Dr. Peet proposed, in his very able and valuable report on Vaccination for the three years ending with December 1861, to enter into an arrangement with at least two vaccine depôts in Great Britain, with the view of ensuring the receipt of periodical supplies.

89. Consequent upon carrying out this arrangement, which was sanctioned by Government, supplies were received during the year from the National Vaccine Establishment in London, and from the Royal Dispensary, Edinburgh. The requirements at home, however, were so great, that the supply from the former was very limited, while from the latter it has altogether ceased,—at all events for a time,—Dr. Husband, the Superintendent, having informed Dr. Peet, that the demand in Scotland exceeded his capability of meeting it.

90. These supplies, though undoubtedly of great use, have not quite answered Dr. Peet's expectations. The most successful, and therefore the most valuable portion thus received, consisted of lymph in hermetically-sealed capillary glass tubes. Some of these were distributed in the Mofussil, but the result was not very encouraging. In Sind, on the contrary, it succeeded so well, that the Superintendent expressed a desire to be periodically supplied with tubes. For the reason stated in the preceding paragraph, however, it will be impossible, at all events at present, to comply with his request.

91. That lymph, obtained from Europe, sometimes succeeds, but more frequently fails, is a fact quite in accordance with the result of general experience on this point in other parts of India. For instance, in an interesting and able report on Vaccination, recently published, Dr. Pearson of the Bengal Service states, "that to rely on England we should be doomed to perpetual vexation and disappointment, for not one batch in ten arrives effective, and uninjured by the heat of the passage."

92. As an illustration, however, of the good effects which are occasionally derived from even a single drop of European lymph, I may mention what recently happened in the hands of Dr. Mills, at present Civil Surgeon at Kolapoor, but who, at the commencement of the year under review, was Civil Surgeon at Dharwar.

93. In January 1862 the Rev. Mr. Huber, of the German Mission, gave Dr. Mills, then at Dharwar, a single capillary glass tube, containing lymph fresh from Europe. Three or four children were immediately vaccinated, and Dr. Mills reports that every puncture took effect, forming large, healthy, well-shaped vesicles, far superior to those produced by the virus at that time in use. The result was so satisfactory, that Dr. Mills subsequently replaced all the old lymph used at that station from the new supply.

94. But this was not the sole benefit. Shortly afterwards Dr. Mills became Civil Surgeon at Kolapoor, and introduced the new Dharwar lymph so effectually at that station, that the proportion of successful cases, under his personal observation, rose from 93 per cent. in 1861 to 95 in 1862.

95. It affords me great gratification to report that the Superintendents, generally, but especially those of the Sind and Southern Circles, cordially acknowledge the ready and obliging assistance afforded by the European Civil authorities on all occasions, when their aid and support were required in furtherance of efforts to extend the usefulness of the Department.

96. I regret, however, to state, that many complaints have reached me of indifference, and even of passive opposition, on the part of native officials. This is greatly to be deplored. I would therefore venture to appeal to all European Civil functionaries in the Mofussil, to endeavour to induce their native subordinates to give the same countenance and support, which they themselves are so ready at all times to afford. The influence thus brought to bear would be of incalculable importance.

97. In the absence of statistics of population, no opinion can be formed as to the proportion which the total number of persons, who have been vaccinated in this Presidency since the Department was formed, bears to the millions of Western India.

98. It is, however, a subject of congratulation that more attention is now being paid to such matters. The bill for taking a census of the Bombay Presidency, recently introduced into the Legislative Council, will, on becoming law, and on being carried into effect, materially assist in solving many problems of deep interest, connected with questions appertaining to the public health. Should its provisions be extended to the Mofussul, we may be able, hereafter, to form some well-grounded opinion as to the proportionate extent to which Vaccination has been carried.

99. Again, in the absence of an accurate registration of births throughout the Mofussil, it is impossible to state whether Vaccination is keeping pace with

the requirements of the population. I much fear it is not. Indeed it would be unreasonable to expect that it is.

100. It was mentioned by Dr. Peet, in the report to which I have already alluded, that previous to the passing of the Act, which rendered Vaccination compulsory in England, the percentage of vaccinations to births, in the parochial districts, was only 33. He at the same time showed that the corresponding percentage in Bombay was upwards of 50. In other words, that out of 7,919 children born during 1861, 4,080 were vaccinated under one year of age.

101. This will, I think, be admitted as very satisfactory as far as Bombay is concerned. But in the absence of Mofussil registration, the same test cannot be applied. I trust, however, the day is not very distant, in which the importance of population statistics,—as bearing, among other matters, on many vital questions connected with sanitary science,—will be so fully recognized as to induce Government to appoint a Registrar General, who in communication with the Civil, Political, and Police authorities of Western India, would, in course of time, do for this Presidency what the official, bearing that designation, has so long been doing for England.

102. Whatever may be the defects of the Vaccination system of this Presidency, I think it must be gratifying to the officers who are so earnestly engaged in working it,—as well as to the Government which has for so many years been labouring to promote its extension and development,—to find that it is being planted in other parts of India. It appears from a recently published number of "Selections from the records of the Government of the North Western Provinces" (part 38), that after a satisfactory trial of what is therein called the "Bombay System" in Rohilcund and Agra, the Lieutenant Governor has submitted to the Government of India, a proposal to extend the system to the whole of the North Western Provinces, by dividing them into four divisions of Vaccination, and by placing each under the superintendence of a Medical Officer.

103. I am the more desirous of alluding to this subject, because there is one feature in the proposed plan which might, I think, at a fitting time, be introduced with great advantage into this Presidency. It is this. While each of the four divisions is to be placed under a Superintendent, it is proposed that one of these,—specially selected as possessing the highest qualifications for the task,—should exercise supervision over the whole Department, so as to ensure uniformity and completeness in the working of the system.

104. But this would by no means be the sole advantage. The additional salary proposed (Rs. 400 a month) would offer an inducement to men of energy and intelligence to remain in a Department, which, under existing circumstances they are but too ready to leave, at a time when their matured experience would prove of great value in promoting its interests.

105. As an illustration of the truth of this remark, I would refer to the case of Dr. Martin, who, after six years of energetic labour and unequalled success in Sind, has just left the Department at a moment when he had succeeded in securing the confidence of the people.

106. I might also allude again to Dr. Asher, an officer of great energy and ability, who during the past year effected much good in the Southern Circle, and who likewise has just vacated his post of Superintendent.

107. His Excellency the Governor in Council, it is true, has been pleased to recognise the services of both these officers by transferring them, at their own request, to the Civil Surgeoncies of Ahmednuggur and Tanna; but I regret, for the sake of the Department, that it held out no inducement to such men to remain,—more especially to Dr. Martin, whose loss, I fear, may long be felt, and whose qualifications would peculiarly have fitted him for the post of Superintendent General.

108. Though not bearing directly on the question of Vaccination, yet in a report having sole reference to a subject connected with the preservation of the public health, it will perhaps not be deemed out of place to submit, for the consideration of Government, the following statement, by the Superintendent of the Southern Circle, of the deplorable sanitary condition of many of the villages within his range.

109. It will perhaps be readily admitted, that no European official has more frequent or better opportunities of closely observing the sanitary state of dwellings, and the physical condition of their inmates, than a Superintendent of Vaccination. Having travelled upwards of a thousand miles during the year in different parts within his range, and having inspected the work of vaccinators in a very large number of towns and villages, Dr. Asher thus describes the deplorable condition of too many of the latter:—

"Within the walls of houses, cleanliness is to a certain extent preserved, more so than in the persons of the occupants. But sweepings and offal are in many villages deposited within a few yards of the doors, and no thought is given, except at long intervals when wanted for manure, to the removal of such accumulations of putrid animal and vegetable matter. In the verandas of dwellings, shelter in the rainy season is given to cattle, where, too, a sick and dying animal, wallowing in a mass of filth, is no uncommon sight, and the carcass is frequently not removed for days, but lies at the very portals of dwelling houses, rendering the neighbourhood most obnoxious."

"The wonder is, not that there is a mass of human suffering where animals are crowded and die, and their carcasses are left to decompose in the only passage for fresh air to man's abode, but that life and health are at all compatible with such circumstances. Might not some sanitary regulations be enforced to remedy these abominations, and thereby diminish disease and

mortality? Were kilns for the consumption of refuse built in convenient and suitable situations, or even places set aside as receptacles for such, in the neighbourhood of all *small* villages, (which are here chiefly referred to), the inhabitants might gradually be induced to use them, and a great improvement be worked, without the help of any municipal authority."

I have the honour to be,

Sir,

Your most obedient Servant,

M. STOVELL, M.D.,

Principal Inspector General, Medical Department.

INDEX TO THE FOLLOWING REPORTS.

VACCINATION UNDER SUPERINTENDENTS—

	PAGE
Presidency Division	1
Central Circle	3
Southern do.	4
Northern do.	5
Sind Division	7
Kattywar Circle	8
Kutch	9
Peint (Nassick)	ib.

VACCINATION UNDER CIVIL SURGEONS—

	PAGE		PAGE
Poona	10	Broach	15
Ahmednuggur	11	Belgaum	16
Sattara	ib.	Dharwar	ib.
Sholapore	12	Kolapore	17
Dhoolia	ib.	Rutnagherry	18
Nassick	13	Kurrachee	ib.
Ahmedabad	ib.	Hyderabad	19
Rajcote	14	Shikarpoor	ib.
Surat	15	Aden	20

APPENDIX—

Vaccination under Superintendents	Table No. 1
Do. do. Civil Surgeons	No. 2
Do. do. Native Chiefs	No. 3
General Abstracts of Vaccination	No. 4
Table of Ages	No. 5
Employment Return of Superintendents of Vaccination	No. 6

VACCINATION UNDER SUPERINTENDENTS.

PRESIDENCY DIVISION.

Local Superintendent.—Sub-Assistant Surgeon ANUNTA CHUNDROBA.

Establishment.—Three Vaccinators and Three Peons.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	8,861	....	....	7,185	81·0
1862....	6,081	....	2,780	4,748	78·1

The total number of Vaccinations during the past year has been less than for several years past. Six thousand and eighty-one persons were vaccinated, being 2,780 less than in the year 1861, and 1,387 less than the average of the last ten years.

To account for this deficiency I beg to submit the following facts:—

In the year 1861 there was an epidemic of small-pox of unusual severity and prevalence, and consequently, as has been observed by all officers in charge of the Department, from the commencement, the demand for Vaccination was proportionately increased. The number of persons vaccinated during that year was almost unprecedentedly large. Thus many persons were protected by small-pox, as well as by Vaccination; and as a natural result, the subjects for new operations for the past year, were materially diminished.

This, however, was not the sole cause of the falling off in the number of Vaccinations. During the year under report, small-pox has scarcely prevailed in Bombay; there having been only 163 deaths registered against an average of 7,429 during the past ten years. Thus the great, and to many perhaps the only, incentive to avail themselves of the benefits of Vaccination, the prevalence of small-pox, was wanting; and this circumstance could not fail to act injuriously upon the exertions of the Establishment. Finding that the morning stations were not frequented by a sufficient number of children, every day an evening station was opened; not at any fixed place, but daily changed from place to place as found convenient. But even here the people, naturally apathetic, and not having the dangers of small-pox before them, were very reluctant to have their children vaccinated even, as it were, at their own doors. This

was, however, mostly in cases of infants and children under one year of age; as they are generally thought by the Natives to be too tender for the operation. Besides these, there were other causes, which, though, in themselves, of minor importance, were yet in the aggregate such as to exercise an influence on the working of the Department.

The decrease in number is not confined to any particular class of the community, as will be seen from the following comparative statement:—

Castes.	Average number annually vaccinated during past 9 years.	in 1861.	in 1862.
Hindoos.....	5,155	5,688	4,160
Mussulmans.....	1,210	1,602	855
Christians.....	903	967	515
Parsees.....	255	535	439
Other Castes.....	242	69	112

The falling off in the number of Parsees is not quite so great as in other classes; and there can be no doubt that the Parsees show a greater desire to get their children vaccinated than they did heretofore.

As to ages: of the total vaccinated 2,630 were under, and 3,451 above, one year of age. Here the falling off is more marked in children under one year of age, as will be seen from the following comparative statement:—

Ages.	Average of previous 9 years.	1861.	1862.
Under one year	4,268	4,080	2,630
Above one year.....	3,485	4,781	3,451

Nor is this difficult to be accounted for. As remarked before, natives generally are of opinion that children under one year of age are too tender for the operation, and should small-pox not prevail they scarcely ever think it necessary to get them vaccinated.

As to sex: the males were as usual greater in number than the females, there being 3,563 males to 2,510 females.

CENTRAL CIRCLE.

Superintendent.—Assistant Surgeon T. B. BEATTY, M.D.

Establishment.—Thirty one Vaccinators.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated,	Percentage of Success.
		Increase.	Decrease.		
1861	42,518	....	2,264	39,799	93·6
1862	39,701	....	2,817	36,872	92·8

In the beginning of April of last year, I assumed charge of the Central Circle from Assistant Surgeon Plumptre, and at once commenced a tour of inspection through Angrias' Colaba, a large portion of which Collectorate I was able to inspect before the setting in of the rains, which began early in June, when I was obliged to return to Head Quarters at Tannah.

During the past year 39,701 persons of all denominations have been vaccinated in this Division, which now includes the Collectorates of Tannah, Ahmednuggur, Poona, and Kandeish. In the month of September last, Sholapore was transferred from the Southern to the Central Circle. Compared with last year the number of Vaccinations falls short by 2,817, but I am satisfied that the cause of this decrease is, in a measure, attributable to the circumstance of the vaccinators not receiving the occasional assistance of peons as heretofore they have done. The difficulty they experience became so great, that one vaccinator wrote to say, that the people in some places, where he was engaged, were beginning to doubt whether Government any longer sanctioned Vaccination, as peons were not observed to accompany the vaccinators to villages as formerly.

Complaints have been constantly made during the year by the vaccinators on account of the want of aid afforded them by Patels and Kulkurnees of villages, and also of the total indifference manifested by many of them in the cause of Vaccination. These complaints have been regularly forwarded to the Civil authorities, who have endeavoured, through the Mamlutdars, to instigate the heads of villages to more activity, but it is a most difficult matter to prove against them any direct neglect of duty.

I would wish it to be understood that the aid of peons is urged not with any idea of causing intimidation to the people, their presence is needed simply for the purpose of warning the people to have their children collected at a certain place on an appointed date. Without a peon, the people will not do this of themselves, in fact the mere presence of a peon in the carrying out of any Government work, imparts confidence to the natives rather than intimidation. Delay in collecting subjects for Vaccination not unfrequently is the cause of loss of the lymph. In some cases it is almost next to an impossibility for the vaccinator of himself to get children collected in sufficient number as will ensure his lymph being preserved.

Of the total number vaccinated, 20,278 were males and 19,423 females, the former showing an increase of 855 over the latter. As regards castes, the Hindoos are by far in excess, there having been 36,127, or above 90 per cent. of the entire number vaccinated. In respect to age, as usual, by far the larger portion were above one year old.

SOUTHERN CIRCLE.

Superintendent.—Assistant Surgeon J. G. ASHER, M.D.

Establishment.—Twenty-three Vaccinators (Government).
Nineteen Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government	1861....	25,391	....	....	23,758	93·5
	1862....	30,405	5,014	....	28,521	93·8
Native Chiefs ..	1861....	16,616	....	....	15,072	90·7
	1862....	16,734	118	....	14,871	88·8

The numbers, as exhibited in the above table, show an increase upon those of the previous year; but inasmuch as any return of Vaccination in the districts concerned, that does not show a large extension of its benefits may be considered unsatisfactory, the increase of 5,014 must be looked upon merely as an index of a little progress.

That Vaccination is, however, far from general, is very apparent from a glance at the children in the schools of the Belgaum, Dharwar, and Sattara Collectorates (Rutnagherry, I have not yet visited), most children attending those schools were certainly "protected," but for one found vaccinated, half a dozen bore on their faces the evidence of having suffered from small-pox.

The general conduct of the vaccinators during the year has been on the whole satisfactory. A few fines have been exacted for minor offences, but no recommendation of dismissal has been thought necessary. They have a thankless duty to perform, are not well paid, and are consequently recruited from a class entitled to consideration for failings. That any one of the staff exerts himself to his utmost, I cannot affirm; to expect such, would, I fear, scarcely accord with a due appreciation of human nature. Most individuals seem to have allotted to themselves a certain monthly work, which they consider will exempt them from punishment, beyond which they feel themselves by no means called on to go.

A great excess, 18,637, of those operated on were above one year of age, and a very large minority were infants and children.

Children of either sex are submitted for Vaccination with equal willingness.

The lymph has suffered no deterioration. In the cold and hot weather, as also during the monsoon, I have seen excellent and characteristic vesicles in the work of numerous vaccinators. In one instance only have I had to interfere, owing to the doubtful efficacy of lymph; and indeed the very obvious marks on the great majority of the children operated on, are sufficient proof of the efficiency of the work. In the monthly employment returns, full particulars of the tour of the Superintendent have been furnished, so it is unnecessary to say more here on this head, than that during the nine months I have held charge, I have visited the Sattara, Belgaum, Dharwar, and North Canara Collectorates, that sixteen vaccinators' work has been inspected, and upwards of 2,500 vaccinated persons seen, entailing travelling to the extent of upwards of 950 miles.

NORTHERN CIRCLE.

Superintendent.—Assistant Surgeon R. DICK.

Establishment.—Thirty-six Vaccinators (Government).
Seventeen Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government	1861....	41,349	....	....	36,948	89·3
	1862....	40,083	....	1,266	35,558	88·7
Native Chiefs....	1861....	24,216	....	....	20,829	86·0
	1862....	18,417	....	5,799	15,982	86·7

The above table shows a decrease of 1,266 operations in the past year compared with 1861, but I regret that in reality there has been a greater diminution than this, for the returns of the four Punch Mahal vaccinators, from January to November, numbering altogether 1,923 operations, have been included in this year's total, while in former years they were included in the returns of vaccinators under Native Chiefs. This number being deducted, the true decrease is seen to be 3,189. A variety of circumstances have contributed to produce this very unsatisfactory result; sickness of many members of the establishment,—vacancies of several months' duration, occasioned by deaths,—a dismissal and resignation at the end of 1861, and during 1862,—the withdrawal of peons from the vaccinators employed in the Ahmedabad Zillah, where previously each vaccinator had the advantage of a police peon to accompany him on his working days, and to assist in collecting children.

At the beginning of the year, the late Superintendent (Assistant Surgeon Rustomjee Byramjee) was at Borsud. He travelled successively through the Napar and Neriad districts to Kaira; and examined the work of General Nos. 47, 127, 96, and 128, and reported favourably on them. I received charge of the duties on 7th February, and travelling successively into Moonda, Tansra, and Kuppurwunj Purgunnas, in the Kaira Zillah, I examined the work of General Nos. 41, 111, and 173, all of which I considered tolerably satisfactory. I then travelled into the Duseroe Purgunna, in Ahmedabad Zillah, and inspected the work of General No. 2, whose records I found correct, and his work satisfactory. General No. 178, who was working the same district, gave less satisfaction, as his lymph seemed deteriorated, the proporion of unsuccessful cases being large. I next travelled into Dholka Purgunna, and examined some old work of General No. 56, who was sick at that time, also the work of General Nos. 48 and 15, and found the former unsatisfactory. I next visited Dhondooka, and as four cases of small-pox had been reported there, I endeavoured to propagate lymph from crusts, but unsuccessfully; fresh lymph, however, was brought to the town a few days afterwards. Having inspected the work of General Nos. 91 and 170, in the Dholera and Ranpoor districts, I marched to Cambay, where General No. 19 was busily employed, and the people willingly accepting his assistance, their fears being aroused by the prevalence of small-pox, in and around the town. I next visited Jumboosur Purgunna, into which General No. 48 had been transferred, as small-pox was reported, and the vaccinator of the district was on sick leave. He had succeeded in

establishing excellent lymph, but complained of difficulty in finding subjects for operation. In the adjoining districts of Amode and Wagra, I found General No. 14 busily and satisfactorily employed; and after inspecting his work, and that of apprentice, General No. 190, who was working with him, I travelled into Oolpat Purgunna, in Surat Zillah, and was engaged in examining the work of General Nos. 47 and 179, till the rains drove me into Surat. During the monsoon I occasionally visited some of the villages in Chorasee district, and on December 3rd, I commenced my present tour by going to Neriad. Having examined Vaccination in that district, and in the neighbouring Purgunna of Matur, I crossed into Dholka with the view of ascertaining the reason of a falling off in the returns of the two vaccinators who reside there. One I found had been suffering from fever, and both were loud in their complaints that they do not get proper assistance from the native officials. I have little doubt that they have some reason for such complaints, but as I have lately communicated with the acting Collector, and he has consented to issue instructions on the subject, perhaps there may be some improvement.

Sub-Assistant Surgeon Dossabhoy Pestonjee, Deputy Superintendent, joined this Department on the 14th January. He first proceeded into Rajpeepla, and examined the work of the vaccinators employed there. He reported favorably on Ardesur Edulsaw, but very unfavorably on Puddumsing and Pehlwansing, who were soon afterwards dismissed. The Raja by whom the vaccinators are paid, affords them assistance and encouragement, and appreciates the benefit of the prophylactic. He next travelled through the Punch Mahals and Rewa Kanta, visiting successively the town of Hallole, Kallola, Godra, Deoghur, Dohud, Jhallode, Loonawars. He mentions as obstacles to the propagation of Vaccination in those districts the extreme ignorance of the people,— the thin-scattered nature of the population, and the wild hilly character of the country,—the unhealthiness of the climate in some parts, and the want of co-operation of the Chiefs. He relates a case in which the people came willingly to be vaccinated by himself, but objected to be operated on by the assistant vaccinator, having lost confidence in him from having observed three instances, one of them fatal, in which small-pox followed the operation. He then travelled into the Mahee Kanta, where he visited the Subur Kanta and Eadur districts, and inspected Vaccination in each, also in the Government District of Prantej, where his tour previous to the monsoon terminated. After the rains commencing at Neriad, he travelled into the Napar and Borsud Purgunnas, in Kaira Zillah; Cambay, Jumboosur, and Amode, in Broach Zillah; and Hansote, Unklesur, and Koorsud, in Surat Zillah, which brings us to close of the year. During the past two and half months he has examined and reported the work of General Nos. 188, 52, 127, 128, 19, 95, 190, 193, 106, and 179, the correctness of their records and the character of their lymph, &c. His remarks on the manner in which the village officials in Surat Zillah perform their duties, in connection with Vaccination, are confirmatory of the correctness of complaints which constantly reach me from the vaccinators. He writes, "I have had personally the opportunity of coming in contact with several village Patells, Havildars, and Tallaties; and from what I have actually seen and experienced, I have been most reluctantly compelled to make a very unfavorable report of them as regards their zeal and co-operation in the cause of Vaccination: I have found that the village Tellatie is seldom, if ever, present at his post, but resides at his own native place, or at the seat of the Mamlutdar's Kutcherry. The village Havildar either renders some futile efforts to collect children for the purpose of Vaccination, or, as is generally the case, goes away to another village on the pretence of some very important business requiring his presence there."

Since Sub-Assistant Surgeon Dossabhoy Pestonjee, joined this Department, I am happy to be able to state, that his zeal and attention in the performance of his duty have been praiseworthy.

SIND DIVISION.

Superintendent.—Assistant Surgeon T. E. P. MARTIN.
Establishment.—Fifteen Vaccinators (Government).

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	49,161	....	....	48,602	98·8
1862....	42,282	....	6,879	40,296	95·3

A falling off occurs in the number of operations during the year of 6,879. It is not difficult to account for the decrease. The ordinary zillahs of the province have, during the past six years, been fairly worked over; numbers are certainly affected by this circumstance, it being difficult now to go any where in these zillahs without finding evidence of past work.

The two portions of the Province which have had the least benefit from the work of the Establishment, are the two Frontier Districts, Northern and Eastern, and a fair field is presented for active operations in these districts, which, with the territory of H. H. Meer Ali Moorad of Khysepoor require, and will now be open to receive more especial attention than it has hitherto been possible to give them.

In two of these Districts, the Eastern Frontier, which has recently been visited, and the Khysepoor State, the Political Superintendent and His Highness the Meer, both hold out every encouragement to the efforts of the Superintendent of Vaccination. There are two important aids to Vaccination urgently required in Sind,—first, an additional number of Vaccinators to cover the immense area of the province,—and, second, some arrangement for the help of vaccinators in the transport of vaccinated children to keep up the supply of lymph.

The vaccinators have been constantly complaining during the year, that the people more and more object to their children being removed, for vaccinating purposes, out of their own village. Yet without a child, operations would be brought to a stand altogether. In most cases the difficulty is a mere *money* difficulty. There are parents who do not object to have their children used as vehicles for the transport of lymph, provided they are paid for it. The present sum sanctioned by Government, ten Rupees per vaccinator per annum, is wholly inadequate for the purpose. One apparent remedy was suggested by a Deputy Collector, who takes an active concern in Vaccination. It appears that Deputy Collectors have the control of a certain sum of money, to be disbursed discretionally for the benefit of the district. It was suggested that the vaccinator might make out a bill, signed by the parents or guardian of the child, and the head man of the village, showing that a certain sum had been actually received from him. This bill would be paid by the Deputy Collector out of the funds at his disposal. Could such a plan be generally adopted, the cause of Vaccination would be strengthened, and no possible hardship could accrue to the guardians of children required for Vaccination purposes.

During the past year 23,724 males and 18,558 females have been vaccinated.

Under one year of age there were 13,165 and above that age 29,117 operations.

The number of successful cases, 40,296, compared with the total number vaccinated, 42,282, gives 95·3 as the percentage of success in the operations of the year. This percentage of success, it is fair to observe represents the final result of revaccination in all cases primarily unsuccessful or doubtful.

KATTYWAR CIRCLE.

Superintendent.—Assistant Surgeon E. R. BUTLER.

Establishment.—Eight Vaccinators (Government).

Twenty-one Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government	1861....	6,100	....	....	5,677	93·0
	1862....	5,085	....	1,015	4,623	90·9
Native Chiefs ..	1861....	16,122	....	....	14,648	90·8
	1862....	16,933	811	....	14,953	88·3

During the past year very few of the assistant vaccinator's work were inspected, on account of there having been no Superintendent of Vaccination, till I joined in April; and then, on account of the heavy rains, which made it impossible to get out, till the 16th of October.

In the month of May, I superintended the work of the two vaccinators in the Dhurrole and Nowanugger Talooka, and I inspected Vaccination in twelve different gaums. The work done in the former Talooka was satisfactory, the Dhurrole vaccinator having been the principal operator. In the Nowanugger Talooka, the result of my inspection was highly unsatisfactory. The second largest town, not including Jamnugger, had not had a single inhabitant vaccinated for five years.

Having to return to Rajcote early this month on account of the rains, I was enabled only to examine a few gaums, viz. four, but this completed the inspection of all the north part of the above mentioned Talookas. From the 15th of June, till the 15th of October, I remained in Rajcote, performing my Civil duties.

In the month of October, I examined the work done in five different Talookas, examined the inhabitants of six gaums who had been vaccinated. Result satisfactory as far as the cases vaccinated, but very unsatisfactory in respect to the number. The Morebee vaccinator gave as his excuse, that he had been ill several months, however I reported him, since which he has been doing more work, and sending his reports more regularly.

In November, I visited most of the southern part of the Nowanugger Talooka, and some part of the Poorbunder Talooka, altogether I examined the work done at fifteen gaums; found lymph good; and returns correct.

In the Poorbundur Talooka, the reason of the returns showing so scanty a number vaccinated, entirely rests with the Rana, who, though a most enlightened Chief in most matters, does not countenance Vaccination. On my asking him his objection, his answer was, "It is such a painful sight to see a baby pricked and the blood flowing," from this I inferred the vaccinator had been rough in his operations, so I made him operate on the children of two gaums. During my residence at Poorbundur he performed as carefully as possible. However, by way of giving the Rana as little excuse as possible on this account, I ordered the vaccinator never to puncture the arm in more than two places, instead of three, as had been the custom.

During the month of December, I travelled through and inspected a great part of four Talookas, I examined the children of nineteen different gaums, and found for the most part the seven had been satisfactorily vaccinated, and the returns correct.

KUTCH.

MR. SUDDASHEW HEMRAJ, G.G.M.C.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	26	....	....	21	80·7
1862....	79	53	....	44	55·6

No report received.

PEINT (NASSICK).

One Vaccinator under Sub-Assistant Surgeon SPENCER.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	122	....	....	68	55·7
1862....	148	26	....	100	67·5

The total number of persons vaccinated in Peint during the year is 148, which is 26 more than the previous year. Of these 104 were males and 44 were females, 100 were successful, being 67·5 per cent. excluding the doubtful cases, or those that were never seen after the operation. The increase, I think, is chiefly attributable to the exertion of the present native vaccinator. The inhabitants, so far as I am able to judge, do not offer any objection to the spread of Vaccination; but, on the contrary, they seem anxious to avail themselves of the great blessing afforded to them by Government.

VACCINATION UNDER CIVIL SURGEONS.

POONA.

One Vaccinator under the Civil Surgeon, Surgeon G. G. W. MAITLAND.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	1,753	....	....	1,487	84·8
1862....	1,832	79	....	1,535	83·7

Vaccination has been steadily carried on by the assistant vaccinator during the past year. The number vaccinated has been somewhat in excess of the previous year. The total number of Vaccinations for the year 1861 was 1,753, during 1862—1,832, giving an increase of 79 over the preceding year. The following table will show the number of children vaccinated according to the sex, caste, age, and result:—

YEAR.	Sex.		Caste.				Age.		Result.		
	Males.	Females.	Christians.	Hindoo.	Mussulmans.	Parsees.	Under 1 Year.	Above 1 Year.	Successful.	Unsuccessful.	Doubtful.
1862	1,201	698	21	1,512	298	1	798	1,034	1,535	132	165

* From the above it will be seen that males bear a large preponderance to females vaccinated, and that more children are vaccinated above one year than under one year. In England, owing to the compulsory laws in operation, this latter rule does not obtain. Infants there being required under penalty to be vaccinated from three to four months after birth. Very few cases of small-pox have been reported during the year, and the disease in an epidemic form has not appeared in this city since 1858.

AHMEDNUGGUR.

One Vaccinator under the Civil Surgeon, Assistant Surgeon M. M. McKENZIE, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861	1,119	....	....	870	77·7
1862	1,240	121	....	1,010	81·4

From the above table it appears that the total number of Vaccinations for the past year 1862, is more than the year 1861. The total number of Vaccinations would have been greater than it at present stands, but for the great prevalence of Cholera from the month of March to the end of June 1862.

SATTARA.

One Vaccinator under the Civil Surgeon, Assistant Surgeon H. COOK, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861	1,811	....	....	1,630	90·0
1862	1,435	....	376	1,265	88·1

The total number vaccinated during the year has amounted to 1,435, showing a decrease of 376 compared with the preceding year. This decrease is attributed by the vaccinator to the very general prevalence of Cholera in the neighbourhood during the past 9 months of the year, and I think the reason given may be considered a sufficient one. The greatest number of Vaccinations were performed in April and May, this being the period when fewer duties in the field allow the parents more time to bring forward their children for the purpose. During the monsoon, Vaccination is almost confined to the town and immediate neighbourhood, and the numbers vaccinated are consequently fewer, whilst in the cold season the people are so greatly occupied in agricultural operations, that they are unwilling to afford time for other matters. Of the total number 765 were males and 670 were females; 654 were children below one year, and 781 were children above that age and adults.

SHOLAPORE.

One Vaccinator under the Civil Surgeon, Asst. Surgeon C. F. OGILVIE, M.D. (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861	1,434	.....	....	995	69·3
1862	1,392	....	42	854	61·3

During the past year, the number of persons vaccinated has amounted to 1,392, of which 712 were males and 680 females; 531 were children under one year, and 861 children above that age; 854 were successful, 305 unsuccessful, and 233 doubtful: the percentage of success being 61·3. As compared with the year 1861, there is a slight decrease, 42, in the total number of operations. The percentage of success, also, does not contrast favourably; that of last year having been 69·3, but I attribute the want of success in a very great many cases to the carelessness of the parents not taking the necessary measures to preserve the pustule. Of the various castes, the Hindoos have been the most numerous, viz. 757, next Mussulmans 400, and other castes 234. Only one Christian, and no Parsee has been vaccinated. The lymph has been of good quality throughout the year, the virus being apparently equally effective during the monsoon, as in other seasons, and the supply has been uninterrupted. I have personally very carefully examined the result of the operation, twice weekly, with a view of detecting any deterioration in the character of the vesicles; but it is very clear to my mind, that there is not only a great objection to submit to the operation, but also to bring the children for inspection after Vaccination.

DHOOLIA.

One Vaccinator under the Civil Surgeon, Assistant Surgeon C. R. COLSTON (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	802	....	....	800	99·7
1862....	857	55	....	796	92·8

Vaccination has been performed with great care and proportionate success during the period of the year that I have been in charge, and I may say that I have never before observed such unqualified success as regards the vaccine vesicles and pustules that were produced, which was no doubt attributable to care in the selection of cases for the propagation of the

virus. I find the same apathy and indifference however, to the benefits of Vaccination, here as elsewhere, which will doubtless continue as long as Vaccination is left optional. The opposition experienced is generally of a passive nature, but the most prejudiced and troublesome are the Brahmins, and those chiefly in Government employ as Carkoons, a plausible reason for which opposition I am unable to discover. The Assistant Vaccinator Shaik Imam has been very attentive to his duties, and always succeeds in finding out more unprotected children than are returned as such by the Mamlutdar. All cases of Vaccination are brought on two occasions in the week for my inspection, so that I am able to certify to the full extent of success returned, and no doubtful cases are included. Vaccine lymph has been supplied to the stations of Malligaum, Indore, and Mundlaisir on request.

NASSICK.

One Vaccinator under Sub-Assistant Surgeon SPENCER.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861	1,656	....	....	1,333	80·4
1862	854	....	802	629	73·6

During the year now under review the number of subjects vaccinated has been 453 males and 401 females, making in all 854, being 802 less than the preceding year. The decrease I regret to say was chiefly owing to the Assistant Vaccinator not having had the aid of a peon as before in collecting subjects for the operation. The removal of the peon therefore is much to be deplored.

AHMEDABAD.

One Vaccinator under the Civil Surgeon, Surgeon D. WYLLIE, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	2,820	....	....	2,666	94·5
1862....	2,778	....	42	2,666	95·9

The above table shows a trifling decrease of 42 in the number vaccinated during the past, as compared with the previous, year. This difference is sufficiently accounted for in the

circumstance that the vaccinator was in a measure new to his duties, and thus laboured under some disadvantage in respect of local knowledge compared with his predecessor. The entire number was vaccinated by Assistant Vaccinator Vallubram Dinanath, General No. 177, the only subordinate detailed for this duty. His work ranged from a maximum of 284 operations in February (small-pox then being present), to a minimum of 188 in December, when the prevalence of intermittent fever interfered with progress. The patients in every case were residents of the city or its suburbs. In reference to sex, males predominated as usual, but to a much greater extent than before, the numbers being 1,601 to 1,177 females. I fear these figures must be interpreted as expressive of a higher solicitude on the part of parents for the safety of their male offspring than of females; at least that is the only reason I have heard assigned for a result so far at variance with the well-known proportions the sexes bear to each other. As to age, a very large majority, that is 2,194, were under one year, against 629 over that age. There is here a wide difference compared with the experience of the preceding year, when the numbers in each category were nearly balanced. But the question of period of life is liable to be affected by the prevalence or otherwise of infantile epidemics, as I have elsewhere remarked. Relative to results, the figures are particularly satisfactory. There were but 63 unsuccessful and 49 doubtful cases out of a total of 2,778 vaccinated. In other words, the ratio of success was equal to 95·9 per cent., a higher average than has hitherto been reached. The lymph continued of good quality throughout, and the vesicles were characteristic and well formed. It was equally effective during the rains as in the other seasons, and at all times there was abundance to meet the requirements of neighbouring medical officers. Small-pox began to appear in January, and lingered in the city till July. At first the cases were due to importation from Rajpootna, where, in the absence of any organized system of Vaccination, the epidemic is ordinarily active. Others, however, were traceable to Dhollera, and thence to Bombay. But in all there were only 28 deaths from this cause throughout, a fact significant of the extent to which the inhabitants are already protected. No instance of inoculation has been reported for many years past; nor is there any other obstruction to the spread of Vaccination beyond a general feeling of apathy and indifference, with here and there an occasional show of resistance; but that even rarely, save among some of the more exclusive sects of the Mahomedan population.

RAJCOTE.

One Vaccinator under the Civil Surgeon, Assistant Surgeon BUTLER (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	1,123	....	....	972	86·5
1862....	821	....	302	708	86·2

No Report received.

SURAT.

One Vaccinator under the Civil Surgeon, Assistant Surgeon W. A. SHEPHERD (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861	1,871	....	....	1,624	86·7
1862	1,740	....	131	1,518	87·2

The number of Vaccinations performed at Surat during the year 1862, in comparison with that of last year, shows a decrease of 131, for which no assignable reason can be suggested, while over the average of the last five years there being an increase of 143 may be considered an improvement. The general result this year is markedly good, being at the rate of 87·2 per cent. of successful cases. This is the highest percentage of any year. The assistant vaccinator reports the greatest number of unsuccessful cases to have occurred during the months of June, July, August, September, and October. There is no marked difference in the numbers in the sex, but a most decided one is manifested in the age columns, which show under the age of one year an increase of 416 over the average of the last 5 years, and above one year a decrease in the same average of 173. This I venture to remark may be considered a great improvement, as Vaccination under one year is performed at a period when small-pox may be expected to be most fatal, and Vaccination most efficacious.

BROACH.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. GLEN.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	1,541	....	....	1,323	85·8
1862....	931	....	610	735	78·9

During the past year 931 children have been vaccinated in the town and neighbourhood. Of these, 531 were males, the remainder females. Of children under one year of age there were 402 vaccinated, and of children above that age 529. The successful cases amounted to 735. The number vaccinated have been less by 610 than those of the year 1861.

BELGAUM.

One Vaccinator under the Civil Surgeon, Surgeon Major H. GLASSE.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	624	....	....	604	96·7
1862....	556	....	68	542	97·4

In the town of Belgaum there have been vaccinated, during the past year, 556 persons, which is a decrease of 68 on the number vaccinated during the previous year 1861, but still an increase of 107 on that of the year before 1860. Of these 556 vaccinated, 542 were successful cases. Besides the above, 278 persons have been vaccinated in the Suddur Bazar, being 216 more than those of the previous year 1861, and 251 more than those of the year before 1860. Of the above number, 278 vaccinated, 260 were successful. The assistant vaccinator has also been useful in repeatedly vaccinating, direct from the subject, in the several, European and Native Regiments, at the station. Small-pox, which had just broken out at the beginning of the year, was present during the first three months, and prevailed greatly in January and February. In the Sudder Bazar 143 cases and 53 deaths occurred. In the town, there were comparatively much fewer, but the number could not be so accurately ascertained.

DHARWAR.

One Vaccinator under the Civil Surgeon, Assistant Surgeon GILBERT (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	1,087	....	....	857	78·8
1862....	1,478	391	....	1,346	91·0

No report received.

KOLAPOOR.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. MILLS.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	2,877	....	....	2,658	92·3
1862....	2,879	2	....	2,737	95·0

During the months of February and March, the numbers were decreased by the prevalence of measles in the town and neighbourhood. Cholera prevailed in April and May, but it did not affect the progress of Vaccination. The ratio of success has very materially increased, viz., from 92·3 to 95 per cent. This I attribute to the introduction of new lymph from Europe, which has proved of such excellence, that it would, I think, be well to state how it was obtained. In January 1862, while acting Civil Surgeon of Dharwar, a single capillary glass tube, containing 2 or 3 drops of lymph was given to me by the Reverend Mr. Huber of the German Mission, who had just received it from Europe. I vaccinated 3 or 4 children with it. Every puncture took, forming large well-shaped healthy vesicles, far superior to those produced by the lymph at the time in use. Before leaving Dharwar in the following March, I had replaced all the old lymph from the new supply. I have, while Superintendent of Vaccination, Southern Division District, tried lymph received from Europe on ivory points, or between glass plates, but never with success. The lymph mentioned above was as clear and liquid as when taken from the vesicle. Immediately on my arrival at Kolapoor, at the end of March last, I obtained a supply of lymph from Dharwar, which was fully established in the month of April, and since that time there have been only six cases known to have been actually unsuccessful out of 2,082 operations, or 0·3 per cent. against 26 out of 961, or 3·3 per cent. in the previous 4 months. I can speak with the greater confidence of the small amount of really unsuccessful operations, having seen how very few failures occur in the Vaccinations performed at the Dispensary where, since the new lymph was introduced, there has not been a single unsuccessful or doubtful case.

RUTNAGHERRY.

One Vaccinator under the Civil Surgeon, Assistant Surgeon KEARNEY (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861	522	....	....	456	87·3
1862	514	....	8	481	93·5

In October 1861 the vaccinator of the station was dismissed, his place was not filled up till June 1862, so that during the year under review, Vaccination was carried on only for seven months, and in the previous, for nine months. The number of operations as shown in the above table in the two imperfect years have been much the same, though in 1862 there was two months' less work than in 1861. I am every way satisfied with the present vaccinator, and after inquiry I have no reason to doubt much the number of operations he has returned. Whether any reliance can be placed on the statement that 93 per cent. of last year's operations were successful it is difficult to say, but I have especially remarked to the vaccinator that truthfulness on this matter is all important. My predecessor (who remained here eight years) annually noticed that the town-people are always averse to receive the benefits of Vaccination; the same complaint still continues. There are said to be 3,005 males and 5,059 females in the Hoojoor, including adults and children, so that if we allow one-third of these to be children, or 3,300, an idea can be formed of the opposition of the town-people. Mothers continue to oppose infants in arms being vaccinated, and this year the difference in those above, and those below, one year, has again been great. Nearly all the vesicles that I have seen have been good. Small-pox has not visited the town, but in July it approached within 10 miles at a village, whose Patell did not welcome the district vaccinator in April. It carried off 40 children, out of a supposed number of 200.

KURRACHEE.

ne Vaccinator under the Civil Surgeon, Assistant Surgeon J. BEAN.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage. of Success.
		Increase.	Decrease.		
1861	795	....	....	709	89·1
1862	1,130	335	....	1,061	93·8

The returns of the past year for the Civil and Police show an increase of 335 in the number of Vaccinations, the entire number being 1,130, of which 1,061 were successful operations.

The protective powers of Vaccination would seem to be better appreciated among some classes than formerly, for many parents have lately brought their children voluntarily from some distance near the Hubb river for operation, these were Brahoes from Meekran. In other cases opposition continues to be encountered, and this is especially the case among the fishermen and laborers at Kemaree.

Small-pox has been slightly prevelant two or three times during the year, but not in an epidemic form, and only 2 cases were admitted for treatment, one of which died.

HYDRABAD.

One Vaccinator under the Civil Surgeon, Assistant Surgeon R. M. CONNELL (Acting).

YEARS.	Total Vaccinated,	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861....	1,675	....	....	1,249	74·5
1862....	1,611	....	64	1,269	78·7

During the past year 1,611 persons have been vaccinated, of which 1,269 are reported successful, 187 unsuccessful, and 155 doubtful, being an increase of 20 successful cases compared with the preceding year, though there is a decrease of 64 in the actual number vaccinated. The vaccinator seems steady and attentive to his duties, he has on several occasions succeeded in taking children from Hydrabad to Kotree for the purpose of supplying lymph to the latter station, and has been the means also of furnishing lymph to many District Dispensaries, and to the Troops stationed here. The lymph and vesicles appear tolerably good.

SHIKARPOOR.

One Vaccinator under the Civil Surgeon, Assistant Surgeon A. E. RIDDELL.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage. of Success.
		Increase.	Decrease.		
1861	1,445	....	....	1,444	99·8
1862	1,448	3	....	1,447	99·9

Fourteen hundred and forty-eight children were vaccinated during the year, of these only one case was unsuccessful. Thirteen hundred and five were under one year, one hundred and forty-three above that age. Seven hundred and fifty-four were males, and six hundred and

ninety-four females, of these 781 were Hindoos, 662 Mussulmen. Two Europeans and three Christians, 1,409 children are said to have been born in the town of Shikarpoor, but this return cannot be depended on. Twenty-three cases of small-pox were reported to me in the first 5 months of the year, none in the last 7 months, of these 11 cases proved fatal, viz., 6 males and 5 females, and 12 recovered, 6 males and 6 females. No opposition is offered to the practice of Vaccination which is performed under my superintendence.

ADEN.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. F. STEINHAUSER.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1861	945	....	....	686	72·5
1862	1,004	59	....	587	58·4

The vaccine lymph in use at this station, produced typical vesicles until the month of April, when with the increasing heat numerous failures showed that it was deteriorating. This result continued until the month of July, when a fresh supply arrived from the National Vaccine Establishment, London, which proved perfectly successful. In the month of September, this virus again manifested signs of deterioration, and was actually lost for a few days; but fortunately the National Vaccine Establishment sent at this period liquid lymph in hermetically-sealed capillary tubes as recommended by Dr. Husband of Edinburgh, which enabled the vaccinator to carry on the operations with success until the 20th of December, when the lymph was again lost, owing chiefly to the neglect of the Assistant Vaccinator himself, who, contrary to orders, relied on the wandering Somales for cases, rather than on the permanent residents of the town.

Notwithstanding the doubtful efficacy of the lymph during four months of the year, an increase of 59 cases vaccinated is recorded on the total number for the year 1862; but the number of successful cases is about 100 below that of 1861. This station as before observed, relies on England for its vaccine lymph, which was formerly sent yearly by the Royal Jennerian Institution. It is now provided by direction of the Secretary of State for India by the National Vaccine Establishment which forwards virus on ivory points or glasses, and in capillary tubes. The charged ivory points have never yet proved successful at Aden, the dry lymph on glasses has frequently failed, but on many occasions been found efficient, whereas the liquid lymph in capillary tubes has never been tried without producing typical vesicles. There can be no doubt that, Dr. Husband's method for transmitting lymph is the most easy and the most judicious. During the year 1862 small-pox first showed itself in the month of August in a Somali, and a few cases have presented themselves for treatment until the end of the year. The disease, however, has not been epidemic; only 15 cases having been admitted to Hospital, of which number two proved fatal. The majority of these cases were of the confluent form, and occurred among Somalis and Arabs.

APPENDIX.

TABLE

VACCINATION UNDER

Table of Divisional Vaccination, showing the Number and Names of the Divisions, and their and compared with those of last Year; the Total Number arranged according to Sex, Caste, of Operations performed by each

Number.	Divisions.	Names of the Medical Officers Superintendents of Vaccination.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last year.		
					1861	Increase.	Decrease.
1	Presidency	Sub-Assistant Surgeon Anunta Chundroba.	3	6,081	8,861	..	2,780
2	Central Circle.....	Assistant Surgeon B. Beatty.....	31	39,701	42,518	..	2,817
3	Southern Circle	„ J. G. Asher	23	30,405	25,391	5,014	..
4	Northern Circle	„ R. Dick	36	40,083	41,349	..	1,266
5	Sind	„ T. E. P. Martin	15	42,282	49,161	..	6,879
6	Kattywar.....	„ E. R. Butler	8	5,085	6,100	..	1,015
		Total	116	163,637	173,380	..	9,743

No. I.

SUPERINTENDENTS.

Superintendents; the Number of Vaccinators employed; the Total Vaccinations performed Age, and Result; the Ratio of Successful to Total Vaccinated; and the Average Number Vaccinator, for the Year 1862.

Total number Vaccinated, arranged according to—												Ratio per cent. of Successful to number Vaccinated.	Average Number of Persons Vaccinated by each Vaccinator.
Sex.		Caste.					Age.		Result.				
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one Year.	Above one Year.	Successful.	Unsuccessful	Doubtful.		
3,563	2,518	4,160	855	515	439	112	2,630	3,451	4,748	671	662	78·1	2,027
20,278	19,423	36,127	1,387	462	..	1,725	5,282	34,319	36,872	1,134	1,695	92·8	1,281
16,237	14,168	27,867	2,064	76	..	398	5,884	24,521	28,521	1,185	699	93·8	1,322
21,981	18,102	34,587	3,785	1	64	1,646	21,139	18,944	35,558	2,837	1,688	88·7	1,113
23,724	18,558	4,641	35,726	..	..	1,915	13,165	29,117	40,296	661	1,325	95·3	2,819
2,773	2,312	4,672	388	..	..	25	2,131	2,954	4,623	245	217	90·9	636
88,556	75,081	112,054	44,205	1,054	503	5,821	50,331	113,306	150,618	6,733	6,286	92·0	1,410

TABLE

VACCINATION UNDER

Table of Vaccination under Civil Surgeons and others, arranged according

Number.	Division of Deputy Inspector General of Hospitals.	Civil Stations.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last Year.			Sex.	
					1861.	Increase.	Decrease.	Males.	Females.
1	Presidency	Tanna	..	38	256	..	218	22	16
		Alibaugh	..	89	66	23	..	50	39
		Bandora	..	79	90	..	11	44	35
		Coorla	..	8	..	8	..	4	4
		Total	..	214	412	..	198	120	94
2	Poona	Poona	1	1,832	1,753	79	..	1,201	631
		Ahmednuggur	1	1,240	1,119	121	..	708	532
		Sattara	1	1,435	1,811	..	376	765	670
		Sholapore	1	1,392	1,434	..	42	712	680
		Dhoolia	1	857	802	55	..	452	405
		Nassick	1	854	1,656	..	802	453	401
		Mahableshwur	..	..	119	..	..	..	..
		Total	6	7,610	8,694	..	1,084	4,291	3,319
3	Northern	Ahmedabad	1	2,778	2,820	..	42	1,601	1,177
		Kaira	..	..	520	..	520	..	..
		Surat	1	1,740	1,871	..	131	919	821
		Broach	1	931	1,541	..	610	531	400
		Rajcote	1	821	1,123	..	302	407	414
		Total	4	6,270	7,875	..	1,605	3,458	2,812
4	Southern	Belgaum	1	556	624	..	68	320	236
		Dharwar	1	1,478	1,087	391	..	844	634
		Kolapoor	1	2,879	2,877	2	..	1,479	1,400
		Rutnagherry	1	514	522	..	8	315	199
		Vingorla	..	159	144	15	..	91	68
		Total	4	5,586	5,254	332	..	3,049	2,537
5	Sind	Kurrachee	1	1,130	795	335	..	685	445
		Hydrabad	1	1,611	1,675	..	64	922	689
		Shikarpoor	1	1,448	1,445	3	..	754	694
		Dispensaries	..	2,461	689	1,772	..	1,529	932
		Total	3	6,650	4,604	2,046	..	3,890	2,760
6	Aden	Aden	1	1,004	945	59	..	610	394
7	Persian Gulf	Bushire	..	324	481	..	157	171	153
		Grand Total	18	27,658	28,265	..	607	15,589	12,069

No. II.

CIVIL SURGEONS AND OTHERS.

to Divisions, and showing the Details as in Table No. I. for the Year 1862.

Total Number Vaccinated, arranged according to—											
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of Persons Vaccinated by each Vaccinator.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under One Year.	Above One Year.	Successful.	Unsuccessful.	Doubtful.		
15	..	21	..	2	12	26	9	29	..	23·7	..
53	13	1	..	22	23	66	72	17	..	80·9	..
9	10	40	16	4	8	71	70	6	3	88·6	..
2	..	6	..	..	..	8	..	6	2	..	..
79	23	68	16	28	43	171	151	58	5	70·5	..
1,512	298	21	1	..	798	1,034	1,535	132	165	83·7	1,832
1,073	131	35	1	..	326	914	1,010	138	92	81·4	1,240
1,318	97	15	1	4	654	781	1,265	71	99	88·1	1,435
757	400	1	..	234	531	861	854	305	233	61·3	1,392
633	86	19	3	116	624	233	796	11	50	92·8	857
673	51	35	..	95	537	317	629	30	195	73·6	854
..	..	..	..	..	..	..	..	..	..	..	..
5,966	1,063	126	6	449	3,470	4,140	6,089	687	834	80·0	1,268
2,444	326	2	6	..	2,149	629	2,666	63	49	95.9	2,778
..	..	..	..	..	..	..	..	..	..	..	..
1,310	265	13	77	75	1,115	625	1,518	170	72	87·2	1,740
660	241	1	29	..	402	529	735	64	132	78·9	931
695	122	..	1	3	423	398	708	72	41	86·2	821
5,109	954	16	113	78	4,089	2,181	5,627	369	274	89·7	1,567
417	135	4	..	..	313	243	542	14	..	97·4	556
1,227	235	16	..	..	383	1,145	1,346	123	9	91·0	1,478
2,843	36	..	..	..	513	2,366	2,737	32	110	95·0	2,879
388	126	..	..	..	50	464	481	29	4	93·5	514
153	5	1	..	..	28	131	145	11	3	91·2	..
5,028	537	21	..	..	1,237	4,349	5,251	209	126	94·0	1,357
367	635	44	25	59	498	632	1,061	33	36	93·8	1,130
545	1,053	9	..	4	963	648	1,269	187	155	78·7	1,611
781	662	5	..	..	1,305	143	1,447	1	..	99·9	1,448
711	1,699	..	3	48	729	1,732	1,975	233	248	80·2	..
2,404	4,049	58	28	111	3,495	3,155	5,752	459	439	86·4	1,396
73	703	2	3	223	155	849	587	275	142	58·4	1,004
..	321	..	..	3.	189	135	324	..	..	100·0	..
18,659	7,650	291	166	892	12,678	14,980	23,781	2,057	1,820	85·9	1,361

TABLÆ

VACCINATION UNDER

Table of Vaccination through the Agency of the Native Chiefs, arranged according for the

Number.	Divisions.	Stations.	Medical Officers.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last year.		
						1861.	Increase.	Decrease.
1	Southern Circle ..	Kolapoor, Sawuntwarree, &c.	Assist. Surgeon J. G. Asher.	19	16,734	16,616	118	....
2	„	Hooblee	Sub-Assist. Surgeon Jamsetjee Byramjee	1	1,186	921	265	....
3	Northern Circle ..	Mahee and Rewa Kanta	Assist. Surgeon R. Dick ..	17	18,417	24,216	..	5,799
4	„	Bhooj	Mr. Suddashew Hemraj G. M. C.	4	79	26	53	....
5	Central Circle	Peint (Nassick) ..	Sub-Assistant Surgeon R. Spencer	1	148	122	26	....
6	Kattywar	Rajcote	Assistant Surgeon E. R. Butler	21	16,933	16,122	811	....
			Total.....	63	53,497	58,023	..	4,526

No. III.

NATIVE CHIEFS' AGENCY.

to the Divisions of Vaccination, and showing Details as in Tables Nos. I. *and* II., *Year* 1862.

Total Number Vaccinated arranged according to—													
Sex.		Caste.					Age.		Result.			Ratio per cent. of Successful to number Vaccinated.	Average Number of Persons Vaccinated by each Vaccinator.
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under One Year.	Above One Year.	Successful.	Unsuccessful.	Doubtful.		
8,666	8,068	15,437	847	60	..	390	4,032	12,702	14,871	1,118	745	88·8	880
596	590	282	893	11	..	..	183	1,003	1,037	130	19	87·4	1,186
9,482	8,985	16,374	795	..	..	1,218	7,158	11,259	15,982	1,421	1,014	86·7	1,083
45	34	38	41	..	..	..	16	63	44	34	1	55·6	20
104	44	148	..	..	..	..	127	21	100	9	39	67·5	143
9,309	7,624	14,431	2,386	..	..	116	5,727	11,206	14,953	1,194	786	88·3	806
28,152	25,345	46,710	4,962	71	..	1,754	17,243	36,254	46,987	3,906	2,604	87·8	849

TABLE

GENERAL ABSTRACT OF VACCINATION

DESIGNATION OF TABLES.	Total Number Vaccinated.	Compared with last year.			Sex.	
		1861.	Increase.	Decrease.	Males.	Females.
No. 1, Vaccination under Superintendents.....	163,637	173,380	....	9,743	88,556	75,081
No. 2, Ditto under Civil Surgeons, &c.	27,658	28,265	....	607	15,589	12,069
No. 3, Ditto by the Native Chiefs' Agency	53,497	58,023	....	4,526	28,152	25,345
Total....	244,792	259,668	....	14,876	132,297	112,495

No. IV.

FOR THE YEAR 1862.

Total Number Vaccinated arranged according to—										
Caste.					Age.		Result.			Ratio per cent. of Successful to Number Vaccinated.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under One Year.	Above One Year.	Successful.	Unsuccessful.	Doubtful.	
112,054	44,205	1,054	503	5,821	50,331	113,306	150,618	6,733	6,286	92·0
18,659	7,650	201	166	892	12,678	14,980	23,781	2,057	1,820	85·9
46,710	4,962	71	....	1,754	17,243	36,254	46,987	3,906	2,604	87·8
177,423	56,817	1,416	669	8,467	80,252	164,540	221,386	12,696	10,710	90·4

TABLE OF AGES.

Vaccination in 1862, *arranged according to Ages, whether performed under or above One Year of Age.*

Establishments, &c.	Age.		Difference.		Total. Vaccinated.
	Under One Year.	Above One Year.	Under.	Above.	
I. Superintendents	50,331	113,306	....	62,975	163,637
II. Civil Surgeons and others	12,603	14,944	....	2,341	27,547
III. Native Chiefs' Agency	17,243	36,254	....	19,011	53,497
Total..	80,177	164,504	....	84,327	244,681
I.—*Superintendents.*					
Presidency Division	2,630	3,451	....	821	6,081
Central Circle	5,382	34,319	....	28,937	39,701
Southern Circle	5,884	24,521	....	18,637	30,405
Northern Circle	21,139	18,944	2,195	....	40,083
Sind Division	13,165	29,117	....	15,952	42,282
Kattywar	2,131	2,954	....	823	5,085
II.—*Civil Surgeons and others.*					
Tanna	12	26	....	14	38
Alibaugh	23	66	....	43	89
Bandora	8	71	....	63	79
Coorla	....	8	....	8	8
Poona	798	1,034	....	236	1,832
Ahmednuggur	326	914	....	588	1,240
Sattara	654	781	....	127	1,435
Sholapore	531	861	....	330	1,392
Dholia	624	233	391	....	857
Nassick	537	317	220	....	854
Ahmedabad	2,149	629	1,520	....	2,778
Rajcote	423	398	25	....	821
Surat	1,115	625	490	....	1,740
Broach	402	129	....	127	931
Belgaum	313	243	70	....	556
Dharwar	333	1,145	....	812	1,478
Kolapoor	513	2,366	....	1,853	2,879
Rutnagherry	50	464	....	414	514
Vingorla	28	131	....	103	159
Kurrachee	498	632	....	134	1,130
Hydrabad	963	648	315	....	1,611
Shikarpoor	1,305	143	1,162	....	1,448
Sind Dispensaries	729	1,732	....	1,003	2,461
Aden	155	849	....	694	1,004
Bushire	189	135	54	....	324
III.—*Native Chief's Agency.*					
Kolapoor, Sawunt Warree, &c.	4,032	12,702	....	8,670	16,734
Mahee and Rewa Kanta	7,158	11,259	....	4,101	18,417
Peint (Nassick)	127	21	106	....	148
Rajcote	5,727	11,206	....	5,479	16,933
Bhooj	16	63	....	47	79
Hooblee	183	1,003	....	820	1,186

EMPLOYMENT RETURN OF SUPERINTENDENTS OF VACCINATION FOR THE YEAR 1862.

CENTRAL CIRCLE.

Superintendent.—Assistant Surgeon T. B. BEATTY.

MONTHS.	Number of Stations visited.	Distance Travelled.	Number of Travelling Days.	Number of Children Inspected.	SUMMARY OF REMARKS.
January	4	136 Miles.	7	542	17 Villages visited and inspected.
February	7	120 do.	4	454	13 Do. do.
March	3	104 do.	5	113	11 Do. do. Change. in Superintendent, Dr. Beatty appointed and assumed charge.
April	7	82 do.	11	218	7 Villages visited and inspected.
May	8	80 do.	15	985	16 Do. do.
June	1	33 do.	4	197	5 Do. do. and returned to Tanna for Monsoon.
July	..	....	..	....	Monsoon.
August.....	..	....	..	....	
September ..	..	....	..	....	
October	..	....	..	....	Sick.
November ..	..	....	..	....	
December ..	5	50 do.	11	1,214	9 Villages inspected.
Total..	35	605 Miles.	57	3,723	

NORTHERN CIRCLE.

Superintendent —Assistant Surgeon R. DICK, M.D.

MONTHS.	Number of Stations visited.	Distance travelled.	Number of Travelling Days.	Number of Children inspected.	SUMMARY OF REMARKS.
January	12	67 Miles.	19	262	8 Villages visited and inspected.
February	16	88 do.	13	88	14 Do. do.
March	15	85 do.	14	279	13 Do. do.
April.....	20	203 do.	12	265	17 Do. do.
May	20	134 do.	17	218	13 Do. do.
June.....	11	53 do.	7	137	8 Do. do.
July.....	..	..	..	..	Monsoon.
August.....	..	..	..	..	
September ..	..	..	..	..	
October	..	..	..	..	Detained on duty at Surat.
November ..	..	..	..	..	
December ..	7	142 do.	12	393	13 Villages visited and inspected.
Total..	101	772 Miles.	94	1,612	

SOUTHERN CIRCLE.

Superintendent.—Assistant Surgeon C. G. ASHER.

MONTHS.	Number of Stations visited.	Distance Travelled.	Number of Travelling Days.	Number of Children inspected.	SUMMARY OF REMARKS.
January	8	86 Miles.	7	220	7 Villages inspected.
February	9	89½ do.	2	236	3 Do. do.
March	..	..	..	..	Superintendent on leave. *Office* in charge Civil Surgeon, Sattara. Change in Superintendent, Dr. Asher tranferred from Central Circle and assumed charge.
April	8	71½ do.	8	374	10 Villages inspected.
May	4	20 do.	3	1,567	8 Do. do.
June	6	47 do.	6	213	4 Do. do.
July	11	90 do.	8	152	3 Do. do.
August	14	100 do.	5	264	7 Do. do.
September ..	15	165 do.	13	338	14 Do. do.
October	11	120 do.	7	25	4 Do. do.
November ..	14	191 do.	14	22	Inspected various Villages in North Canara engaged in instructing Vaccinators with regard to Forms.
December ..	8	106 do.	6	105	1 Village inspected, was detained by sickness for some days at Dharwar.
Total..	108	1,086 Miles.	79	3,516	

SIND DIVISION.

Superintendent.—Assistant Surgeon T. E. P. MARTIN.

MONTHS.	Number of Stations visited.	Distance Travelled.	Number of Travelling Days.	Number of Children inspected.	SUMMARY OF REMARKS.
January	9	136 Miles.	10	1,378	53 Villages visited between the Stations.
February	11	127 do.	19	2,269	123 Do. do.
March	10	143 do.	21	1,205	51 Do. do.
April	13	153 do.	15	380	9 Do. do.
May	12	150 do.	13	1,106	59 Do. do.
June	12	140 do.	10	565	40 Do. do.
July	..	..	..	..	Stationary at Tatta, on account of the inundation.
August	..	..	..	..	
September ..	..	..	..	..	
October	4	54 do.	6	136	7 Villages visited detained for a time from travelling on account of flooded state of the roads.
November ..	19	196 do.	18	540	42 Villages visited between the Stations.
December ..	11	182 do.	7	435	6 Do. do.
Total..	101	1,281 Miles.	119	8,014	390 Villages visited between the Stations.

KATTYWAR CIRCLE.

Superintendent.—Assistant Surgeon E. R. BUTLER.

MONTHS.	Number of Stations visited.	Distance Travelled.	Number of Travelling Days.	Number of Children inspected.	SUMMARY OF REMARKS.
January	..	..	..	..	
February....	..	..	..	..	
March	..	..	..	..	
April	..	..	..	..	
May	12	120 Miles.	21	374	
June.....	2	62 do.	3	75	
July	..	..	..	..	Monsoon.
August.....	..	..	..	..	
September ..	..	..	..	..	
October	..	..	..	..	
November ..	20	191½ do.	9	376	
December ..	9	145 do.	7	325	
Total..	43	527½ Miles.	40	1,150	

RESOLUTION OF GOVERNMENT.

GENERAL DEPARTMENT, No. 1131.

Bombay Castle, 27th July 1863.

THE Governor in Council regrets again to find that there has been a falling off in the number of Vaccinations in the year under report, as compared with the number during the previous year. They are stated to be 14,876 less than in 1861, and when added to the falling off of 14,765 cases in 1861, gives a total falling off in 1862, as compared with 1860, of 29,752 cases.

2. The diminution in the numbers is attributed "to sickness and indolence on the part of some of the Vaccinators, to want of support from native officials, and to increasing difficulty in obtaining the assistance of peons in the districts;" but, as observed by the Principal Inspector General, with the exception of the last-mentioned cause, the state of matters described has always been in existence more or less, even when Vaccination was making favourable progress, and cannot therefore be received as now especially explaining the falling off in members; and Dr. Stovell, although he states it would be premature to hazard an opinion on the subject, and that the experience of another year or two will be required before sufficient data for determining the question can be obtained, appears disposed to ascribe the falling off in the Vaccinations to the diminished amount of European agency in superintending the department.

3. His Excellency in Council concurs with the Principal Inspector General that the data are insufficient to form an opinion; for in Sind, where no change has taken place, the decrease in the number of Vaccinations during 1861 was upwards of 10,000, and during the past year there has been a further decrease of upwards of 6,000. It is possible, that those who were most open to persuasion to adopt the prophylactic having permitted themselves and their families to be vaccinated, the field of operations is becoming year by year narrowed to those who are most opposed to and prejudiced against the measure, and that the difficulties of maintaining the high numbers which have of late years been attained are therefore daily increasing. That this seems to be the case appears to be borne out by the gratifying fact, adverted to in paragraphs 35 to 37 of Dr. Stovell's report, that the proportion of infantile vaccinations has increased. This His Excellency in Council considers a surer test than any other of the value which Vaccination maintains amongst those whose objections and scruples against it have been overcome.

4. The Honorable the Governor in council is, however, of opinion that much assistance might be afforded to the personal efforts of the Superintendents and of their Vaccinators by having information proving the benefits of Vaccination, such as is given in paragraph 39 of the report, carefully collected and published in the vernacular of each district, and distributed among the people.

5. The Revenue Commissioners, as well as the Collectors and Officers in charge of districts, will also be requested to give the aid of their influence in support of the Department, and to impress from time to time upon all their subordinates the importance Government and themselves attach to the extension of the safeguard, in which every philanthropic person may reasonably be supposed to take a deep interest.

6. Extract (paragraphs 50 to 54) of the report should be transferred to the Political Department, with the view that the co-operation of the native Chiefs in the work may be invited through the Political Officers.

7. With reference to paragraph 53, the Governor in Council considers Government could not ask the Chiefs to contribute to a Vaccinating Fund, but those who have already employed Vaccinators of their own will be urged to place them under the supervision and control of the Superintendents, and those who have not as yet moved in the matter will be urged to lose no further time in doing so.

8. His Excellency in Council is sanguine that if the Political Officers earnestly and fully explained to the Chiefs the extent to which Government appreciate such efforts for the good of their people, there may be more activity on the part of the Jagheerdars and others to assist in the work.

9. The Governor in Council is also of opinion, that the aid of Municipalities might, as suggested in paragraph 80 of Dr. Stovell's report, be enlisted in support of Vaccination. All Municipalities of any size or importance might with advantage, His Excellency in Council considers, permanently employ a Vaccinator, in whose labours, and in checking whose returns, the Municipal Commissioners should be induced to interest themselves.

10. The zeal and energy exhibited by Drs. Asher and Martin are highly creditable to those Officers, and the Governor in Council desires that the Principal Inspector. General will convey to them the high sense which is entertained by Government of their exertions during the year under review. They are, in the opinion of the Governor in Council, fully entitled to the high encomium which Dr. Stovell has passed upon them in paragraphs 58 and 65 of his report.

11. With regard to the suggestion made in paragraphs 62 and 63, His Excellency in Council is of opinion that it is not advisable to charge the

discretional allowances placed at the disposal of Collectors and their Assistants, which are already insufficient for the many calls upon them, with remuneration to parents who allow vaccine lymph to be taken from their children, and that it would be preferable to place at the disposal of each Superintendent a certain sum, to be disbursed in the manner proposed, which it would be the duty of the Superintendents to see expended by the Vaccinators. The Principal Inspector General should report the sum he thinks should be sanctioned for each Circle, and the proportions in which the amount should be distributed among each of the districts of which the Circles are composed.

12. The difficulties complained of in consequence of the withdrawal of Peons the Governor in Council conceives to be well founded, for much of a Vaccinator's time may be saved, and considerable assistance may be given by an intelligent Peon being sent in advance to warn the village authorities of the Vaccinator's intended arrival, and to make arrangements for collecting the children for vaccination and inspection; and His Excellency in Council is satisfied that it is no luke-warmness on their part that has compelled any of the Collectors to withdraw this aid. The proper remedy is to permit the Vaccination Department to employ Peons of its own, as recommended by Dr. Stovell, in his 77th paragraph. The total number required, it is stated, would be 125, and the expense, it is presumed, at Rupees 5 each, would amount to Rupees 625 per mensem; this the Governor in Council will recommend to the Government of India for sanction.

13. His Excellency in Council will also support with his recommendation to the Government of India the suggestion offered, in paragraph 103, for the appointment of a General Superintendent.

14. The attention of the Commissioner in Sind should be called to paragraphs 85 and 86 of the Report, with the view of adopting such measures as may appear to him advisable for the purpose of putting a stop to the practice of Inoculation, which is stated "to be carried on to a considerable extent."

15. It is to be regretted that the difficulties of obtaining a regular and constant supply of Vaccine Lymph from Europe have prevented its being fully tried in this Presidency. It seems a point of importance to ensure the receipt of the Lymph at a suitable season of the year, for it will be perceived that that given by the Reverend Mr. Huber to Dr. Mills arrived in the month of January. It is not stated at what period the supply sent up to Sind which "succeeded so well" was received, but this should be noted for future guidance, and it is also worthy of consideration whether the receipt of supplies in good condition at all seasons of the year might not be ensured by an application to the Directors of the Peninsular and Oriental Company to allow the cases containing the hermetically-sealed tubes to be kept in the ice-houses of

their steamers during the voyage. The preservation of the Lymph might perhaps be further secured at the Presidency by obtaining permission to allow the supply to lie in the Ice-house until required for distribution and use.

16. The Revenue Commissioners should be requested to draw the special attention of all officers under their control to the observations in the last paragraph of Dr. Stovell's Report.

A. D. ROBERTSON,
Secretary to Government.

BOMBAY: PRINTED AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR THE YEAR 1863.

Bombay:
PRINTED FOR GOVERNMENT
AT THE
EDUCATION SOCIETY'S PRESS, BYCULLA.

1864.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR THE YEAR 1863.

No. 694 of 1864.

From the Principal Inspector General, Medical Department,

To the Secretary to Government, General Department.

Sir,—I have honour to submit to His Excellency the Governor in Council the Annual Report on Vaccination for 1863. It consists—

1*st.*—Of a brief statement of the general working of the Department during the year;

2*ndly.*—Of extracts from the reports by the Superintendents of Vaccination and by Civil Surgeons; and

3*rdly.*—Of tabulated figured results.

2. Subsequent to the date of my last report, no change took place, either among the Superintendents, or in the extent of their respective circles of vaccination. They stood as follows up to the close of the year:—

Northern	Circle—	Assistant	Surgeon	Dick, M. D.
Central	do.	„	„	Beatty, M. D.
Southern	do.	„	„	Plumptre.
Sind	do.	„	„	Pinkerton, M. D.
Kattiawar	do.	„	„	Butler, M. D.
RewaKanta	do.	„	„	Adey.
Presidency	do.	Sub-Assistant	Surgeon	Anunta Chundroba.

3. There is, I think, good reason to be satisfied with the amount of work performed. In the report for 1862 it was shown that the number of operations was nearly 15,000 less than during the preceding year, and it was stated, in consequence, that the general result could not be "regarded as otherwise than unsatisfactory." I am happy to say, however, that the returns for 1863 show a decided improvement, and contrast favourably with those of the former year. Thus, while the total number of vaccinations in 1862 was 245,565, the number for the past year was 267,995, being an increase of 22,430.

4. This increase, though not very large, is nevertheless much greater than I expected. Indeed I anticipated a falling off in numbers, owing to the great difficulty which was experienced by the Superintendents in obtaining the aid of peons, to assist their vaccinators in the districts in collecting children for vaccination, and subsequently for inspection.

5. In the last report I dwelt at some length on this subject. It was pointed out that in consequence of recent reductions in the revenue establishment, the Collectors had been compelled, to a great extent, to withhold the assistance of peons, their diminished number being merely sufficient for the discharge of the revenue duties for which they were entertained. I, in consequence, urged the importance of removing these obstacles to progress by sanctioning the entertainment of one peon for every vaccinator, employed by each Superintendent in British territory.

6. It is gratifying to record that these dfficulties are now at an end, for, owing to the support which was afforded to my recommendation by His Excellency the Governor in Council, the sanction of the Government of India has recently been received for the employment of 125 peons to be attached to the Department.

7. I anticipate as the result,—in common I believe with every Superintendent,—a great extension of vaccination, and consequently not only a considerable saving of life, but a proportionate diminution of blindness and of the many other evils which spring from small-pox, and which prevail in all directions to so terrible an extent.

8. It is but just to Dr. Dick, of the Northern Circle, and to Dr. Beatty, of the Central, to state that the largest portion of the increase is met with in the returns from their districts, and is mainly due to their exertions. There was also an increase at the Presidency; while in the Southern, Sind, Kattiawar, and Rewa Kanta Circles, there was a slight diminution. There was also a marked increase under the Civil Surgeons at Sattara, Rutnagherry, Kurrachee, Rajkote, and Broach, but a considerable falling off at Dhoolia, Nassick, Honore, Dharwar, and Hydrabad.

9. The greatest increase in any one Circle was in the Northern. Dr. Dick attributes it very much to the more effectual assistance which was afforded by the Native officials, in consequence of the strict orders issued by the Civil authorities. As doubtless, however, equally strict orders were given by the Civil authorities in all other parts of the Presidency, I am inclined to regard it as due mainly to his own unwearied exertions.

10. Dr. Beatty seems to attribute the improvement shown in the returns from his Circle chiefly to a plan which he adopted for facilitating the work of his vaccinators, by arranging personally with Native officials for the vaccination of children in the districts through which he passed. Thus, after having inspected the work and register of a vaccinator, and satisfied himself as to the quality of the lymph, he proceeded in advance, visiting the villages and towns on his route, and collecting the children. With the aid of the patel and kulkurnee, a list of all unvaccinated children was then made out, signed, and forwarded to the vaccinator who was to follow.

11. The particulars of the plan will be found in the extracts from his report, and as I consider the mode of procedure very judicious, I would commend it to the consideration of the other Superintendents. Dr. Pinkerton adopted a somewhat similar plan in the districts through which he travelled in Sind.

12. Out of the total number of operations, about 10 per cent. proved unsuccessful. Thus out of 267,995 vaccinations, 243,138 were reported as successful. Every practicable means appear to have been taken by the Superintendents to test, personally and otherwise, the accuracy of the returns of their vaccinators, and there is good reason to believe that in the main they are correct. Two instances of falsification, however, came to light in Sind, one in Canara, and one in the Central Circle. It should therefore be understood that the figures are to be regarded, not in the light of perfect accuracy, but merely as an approximation to it.

13. In reporting the case of falsification in the Central Circle, Dr. Beatty, who has had a very large and very lengthened experience, and who is therefore not likely to be mistaken, stated that with that one exception, the returns had invariably been found correct, and that the reported percentage of successful cases was "as near an approximation to truth as possible."

14. Dr. Dick also, after examining the work of no less than 29 vaccinators, and verifying their returns, states that he failed to discover any false names recorded, and that he is "satisfied that falsification does not take place to any great extent."

15. With regard to sex—

145,159 were males, and
122,836 were females.

This relative proportion corresponds very closely with that of previous years.

16. The castes were as follows :—

Hindoos	198,427
Mussulmans	56,036
Christians	1,913
Parsees	912
Other castes	10,707
Total	267,995

17. I mentioned in the last report, as a proof that vaccination was gradually making its way into general favour with the people, that the proportion of operations in the infantile population was steadily increasing. The number of vaccinations in 1862 in children under one year of age was 80,177. The returns for 1863 give 92,948, being an increase of 12,771.

18. To a certain extent this is no doubt satisfactory, but I hope to find a still larger increase year by year. The feelings and prejudices of the people on this point seem to vary very much in different localities. Thus, while the returns from the Deccan and Southern Maratha Country continue to be conspicuous, above all others, for their very large proportion of operations in persons above one year of age, those from Kattiawar and Sind are much more satisfactory; while in the Collectorates of Gujerat the number of vaccinations in children under one year of age was actually larger than in those above it.

19. It is remarked, indeed, by the Superintendent of the Northern Circle, that the unwillingness to submit young infants to vaccination, which is observed elswhere, is rarely met with in Gujerat. The returns from the Civil Surgeons at Ahmedabad, Kaira, Broach, and Surat, give evidence to the same effect. They all show a very large proportion of operations in early life. At Shikarpoor there seem to be no prejudices on the subject, for while only 252 vaccinations were performed in persons above one year of age, no less than 1,366 were in children under that age.

20. I have dwelt at some length on this point, because I regard it as one of very great importance, inasmuch as the result of the accumulated experience of Europe shows that vaccination during infancy, properly performed, gives a far greater security from small-pox, than when resorted to at any later age. I would therefore very earnestly entreat the Superintendents of the Central and Southern Circles,—in which the prejudices against early vaccination are much stronger than elsewhere,—to endeavour by every means in their power to overcome these prejudices, and to make parents comprehend its paramount advantages.

21. The question assumes a still greater importance, when it is borne in mind that the occurrence of a case of small-pox after vaccination does great mischief by increasing the feeling of distrust, which prevails among the Native

population, with regard to its permanent efficacy as a safe-guard. A longer experience, and a more extended education, will no doubt assist in gradually removing this feeling. In the meantime, the Superintendents, I have no doubt, take every available opportunity of pointing out the fact, that vaccination not only effects an enormous amount of good by diminishing the extent of small-pox, but by modifying the character of this disease when it does appear, changes a deadly disorder into one of comparatively slight importance.

22. In proof of the correctness of this remark, it may be mentioned that the returns of the London Small-pox Hospital, extending over a long series of years, show that the average rate of mortality among the patients, therein admitted, unprotected by vaccination, has been 37 per cent., whereas the mortality among the patients, properly protected, has been less than half of one per cent.

23. The Superintendent in Sind even states on the latter point, that after making many inquiries, and taking no little pains to find out, he has never heard of a single successfully vaccinated child having died of small-pox.

24. With the exception of Bombay itself, where small-pox prevailed to a great extent at the commencement of the year, and of Kurrachee where it was equally prevalent towards its close, the disease does not appear to have shown itself in a severe form in any part of the presidency. Throughout Gujerat it is reported to have been much less prevalent than usual, and the Superintendent in Kattiawar mentions that he had not seen a single case in a protected subject. There was very little in the Northern Deccan, but in the Southern Maratha Country it was met with in nearly all the zillahs during the earlier part of the year, though apparently in a mild form. In Sind a few cases appear to have shown themselves in nearly every district, but not in a severe form. Wherever it did make its appearance, active measures were immediately adopted by the Superintendents and their establishments to arrest its progress.

25. It was mentioned in the last report, that with exception of Sind, the practice of inoculation appeared to be gradually disappearing from nearly every part of the Presidency. I stated, however, that one case had come to light in the Tanna zillah, and one at Bulsar. During the past year no case came actually to the knowledge of either of the Superintendents. Dr. Dick, however, of the Northern Circle, has recently received information that it is still practised in the Bulsar pergunna, and he is the more inclined to believe that such may be the case, from the circumstance of the extreme unwillingness of the people in that district to accept of vaccination.

26. He states that the bias of the villagers for vaccination or inoculation depends very much on the patel, and that as the latter is perfectly indifferent on the subject, he affords his support to the inoculator in consideration of

the fees which he receives. Dr. Dick is of opinion that an effectual stop to the system might be put by holding the village officials responsible, as they must always be aware of the inoculator's proceedings. As the new Penal Code provides, I believe, against the continuance of the practice, I would suggest whether it would not be desirable for Government to communicate with the Magistrate of Surat on the subject.

27. With regard to the practice in Sind, I am happy to state that not a single case came to light during the year, and the Superintendent is of opinion that recent steps taken by the Commissioner will completely put an end to it.

28. The character of the vaccine lymph has been well reported on by nearly every Medical Officer, the resulting vesicles having been generally well developed and well-marked. Dr. Ritchie, for instance, the Deputy Inspector General of Hospitals, who has long taken an active interest in the Department,—and under whose supervision the Dispensaries in Sind are year by year becoming of greater value in furthering the advance of vaccination,—reports that the prophylactic virtue of the lymph throughout that province continues unimpaired. Testimony to the same effect has reached me from nearly all quarters.

29. It is evident, however, from the recorded observations of two Superintendents, that one of the most important duties of these officers is to examine, as frequently as possible, the condition of the lymph used by their establishments, so as to ensure its remaining undeteriorated. Dr. Plumptre, for instance, found it necessary to change the lymph used by two of his vaccinators in the Southern Circle, owing to the insufficiently developed vesicle which it produced. He mentions that he obtained supplies on several occasions from Dr. Mills, the Civil Surgeon at Kolapore, and that the vesicles, produced therefrom, satisfied him that the lymph well deserved the favourable mention which was made of it in my last report.

30. In the Northern Circle, again, Dr. Dick considered it desirable to introduce fresh lymph, and he anticipates good results from having done so, as the vesicles proved more perfect, and the failures more rare.

31. There is good reason to believe, however, that failures will henceforward become still more rare; for the increased allowance, recently sanctioned by Government, for remunerating Native parents for allowing their children to be conveyed from village to village, for the purpose of ensuring the virus being transmitted from arm to arm, has in this respect materially increased the efficiency of the Department.

32. It has frequently been represented that no extensive operations could be depended on, unless this method was more fully adopted, as the previous system of trusting to the effects of lymph forwarded from place to place on glasses and on ivory points, was too often attended by want of success, as well as by great delay.

33. Dr. Beatty regards the change as a "great boon," while Dr. Plumptre and others are of opinion that, by leading to the discontinuance of the objectionable mode of procedure, just mentioned, the purity of the lymph will be promoted, and the percentage of successful cases consequently increased.

34. The Superintendents of the Central and Sind Circles have recently suggested the advantage of being supplied with empty capillary glass tubes. They think that their vaccinators could easily be instructed in the method of filling them, and that thus a constant supply of lymph would at all times be available for transmission wherever it might be required. I have already anticipated this suggestion, however, for in June last I directed the Medical Storekeeper to procure a supply from England with this object in view, and it may be expected to arrive at an early date.

35. In paragraph 4 of the Resolution passed by Government on my last report, it was suggested that much assistance might be afforded to the personal efforts of the Superintendents, and their vaccinators, by collecting and publishing in the vernacular of each district, and by distributing among the people, the particulars of any striking facts which might be met with proving the benefit of vaccination.

36. This subject has not been lost sight of. I impressed on Superintendents the necessity of bearing it in mind, and requested that every opportunity which presented itself for carrying into effect the desire thus expressed by Government, might be taken advantage of.

37. The Superintendents have not failed to give attention to the subject, but hitherto no very marked instances have been met with. Dr. Beatty, for instance, reports that when travelling through his districts he took much pains to collect facts, such as he formerly brought to notice, sufficiently striking for publication, but that he had failed in meeting with such.

38. Dr. Pinkerton also states that no special case came to his notice during the year. He adds, however, that after having travelled over the greater part of Sind, and after having examined thousands of children and hundreds of villages, he feels sure that nobody could proceed from one end of the province to the other, without reading in the faces of the rising generation the striking benefits of vaccination;—that whereas nearly every adult is marked with small-pox, a large portion of the population, below ten years of age, has been vaccinated, and has escaped the disease.

39. An interesting feature in the proceedings of the year,—and one which eventually may exercise great influence on the Department,—is the commencement of vaccination by municipalities. In the last report I suggested that, as the objects of municipal taxation embrace, or ought to embrace, all questions connected with the preservation of the public health,—of which vaccination is an important branch,—a portion of the proceeds of such taxation ought to be devoted to the dissemination of the prophylactic. Government were pleased

to support this view, and expressed an opinion that all municipalities of any size or importance might with advantage permanently employ a vaccinator, in whose labours, and in checking whose returns, the Municipal Commissioners might be induced to interest themselves.

40. Thanks to the intelligent zeal of Dr. Plumptre, the Superintendent of the Southern Circle, and to the hearty co-operation of Mr. Chapman, the Collector of Sattara, the system has been commenced in that zillah, by grouping together several municipal towns into what Mr. Chapman calls a "division," and by employing therein a vaccinator on 15 rupees a month. Six such divisions have been formed as an experimental measure. The size of each is such as will permit of all the towns therein being visited by the vaccinator once every three months.

41. As far as the Collectorate of Sattara is concerned, this arrangement is equivalent to doubling the staff of vaccinators, without any increase of expenditure on the part of Government. I shall watch its progress with much interest, for I attach very great importance to the successful commencement of a plan which promises to identify local municipal bodies with efforts to render the protective system of vaccination more extended, efficient, and complete.

42. Dr. Plumptre has commended the subject to the consideration of the Collectors of the other zillahs within his range; and I trust the Superintendents, generally, in communication with the Civil authorities, will endeavour to introduce the system into their respective circles. In a further part of this report I have extracted in full all the remarks made by Dr. Plumptre on the subject.

43. It is satisfactory to learn, that the Municipal Commissioners of Kotree have likewise recently adopted the system, and have sanctioned an expenditure of 15 rupees a month for a vaccinator. The Municipality of Hooblee also entertain a vaccinator of their own.

44. It gives me great pleasure to state that the Superintendents, generally, express their cordial acknowledgements for the substantial assistance they have at all times received from the Civil, Political, and Police authorities. Dr. Plumptre dwells especially on the warm interest taken by Mr. Chapman in the extension of the safe-guard.

45. Dr. Butler, again, the Superintendent in Kattiawar, pointedly alludes to the very valuable assistance afforded by the Political Agent in that Province. He mentions that Major Keatinge had written to each Chief requesting his countenance and support—that he had a copy of the last report, and of the remarks made thereon by His Excellency in Council, translated and forwarded to each Chief,—and that he never failed to impress on them in conversation the importance of exerting their influence in behalf of the cause.

46. It is gratifying to be able to report, that with one exception, I have every reason to be satisfied with the exertions made by each Superintendent

during the year. The junior in the Department, Dr. Pinkerton, the Superintendent in Sind, is spoken of very highly by Dr. Ritchie, the Deputy Inspector-General of Hospitals, particularly for his exertions in personally testing the work of his vaccinators. The employment returns at the end of the report will show that he travelled upwards of 1,500 miles, and personally inspected more than 7,000 children. In doing this, he travelled further, and inspected more children, than anybody in the Department.

47. Dr. Dick, of the Northern Circle, travelled nearly as far, and made a very extended tour, during which he examined the work of no less than 29 vaccinators, scattered in different localities throughout his extensive range. Dr. Beatty, of the Central Circle, personally inspected nearly twice the number of children which he did the previous year, and travelled to a much greater extent.

48. Dr. Butler, the Superintendent in Kattiawar, both travelled further, and inspected more children, than during 1862, although his duties at Rajkote only admitted of his spending a very limited time in the districts. Mr. Anunta Chundroba, the Superintendent at the Presidency, also did his work well.

49. In the Southern Circle, Dr. Plumptre inspected more children than during the previous year, and although he did not travel quite so far, he particularly distinguished himself by organizing, in communication with Mr. Chapman, the scheme of municipal vaccination in the Sattara zillah. He also did every thing in his power,—in common, I have no doubt, with the other Superintendents,—to excite an interest in the Department, and to make it popular, by rendering medical aid to all requiring it, by visiting the Chiefs in the Native States through which he passed, by encouraging visits from Native officials, by visiting the schools, and by pointing out the benefits of vaccination to the people.

50. I regret that I am unable to speak in equally favourable terms of the exertions made by the Superintendent in the Rewa Kanta. Though in charge of a very limited district, no progress has been made. On the contrary, there was a decrease in the number of vaccinations instead of an anticipated increase, and the cause has rather retrograded than advanced. It is but just, however, to the Superintendent, to state that his health suffered a good deal towards the close of the year, and I am desirous that every allowance should be made on this account.

51. With a few exceptions, the general conduct of the vaccinators was very satisfactory, and I am bound to add, that a considerable number exhibited a most praiseworthy diligence and zeal.

52. I regret having to record that Dr. Beatty, after eight years' labour as Superintendent in different parts of the Presidency, has recently left the Department, his services having been required by Government for other duty. The

loss of his matured experience will be severely felt. I beg to offer him my best acknowledgments for the deep interest he has taken in promoting the success of the cause entrusted to his care, and at the same time to express the high opinion I entertain of the ability and judgment which have characterized his proceedings.

53. In paragraphs 6 and 31, I alluded to two important measures, recently sanctioned by Government, which have very materially increased the efficiency of the Department; but there is still another to record which, while conferring an invaluable boon on a considerable number of deserving men, cannot fail to prove of the greatest benefit to the cause. I allude to the recent admission of Native vaccinators to the privilege of pension.

54. The necessity of improving the condition and prospects of these men has often been pointed out. It has frequently been represented that no efforts to extend the usefulness of the Department, commensurate with its great importance, could reasonably be expected to prove successful, except on the condition of such improvement being made. Government fully recognized the necessity, and submitted the subject for the favourable consideration of the Government of India. It is now most gratifying to me to be able to record that sanction for this great boon has recently been received.

55. Not only will the present race of men, with this brightening view before them, be stimulated to greater energy and activity; but with the improvement thus made in the status and prospects of a vaccinator, a better class of men may reasonably be expected to enter the Department. This, in itself, I regard as a point of much importance, for the greater personal influence of such men could scarcely fail to prove of the highest value in smoothing difficulties, and in removing prejudices.

56. The adoption, by Government, of these three important measures, bears convincing testimony to the great practical interest taken by His Excellency in Council in everything relating to the improvement and efficiency of the Department. I am quite sure they will be fully appreciated by the Superintendents and their establishments, and I am equally sure they will be responded to on their part by increased exertions, leading to far greater results than have ever yet been shown.

I have the honour to be,

Sir,

Your most obedient Servant,

M. STOVELL, M.D.,

Principal Inspector-General, Medical Department.

Bombay, 31*st March*, 1864.

INDEX TO THE FOLLOWING REPORTS.

VACCINATION UNDER SUPERINTENDENTS—

	PAGE
Presidency Circle	1
Central do.	1
Southern do.	4
Northern do.	6
Sind do.	9
Kattiawar do.	12
Rewa Kanta do.	13
Peynt (Nassick)	14

VACCINATION UNDER CIVIL SURGEONS—

	PAGE		PAGE
Tanna	15	Aden	22
Poona	15	Bushire	22
Ahmednuggur	16	Ahmedabad	23
Sattara	16	Kaira	24
Sholapoor	17	Surat	24
Dhoolia	18	Broach	25
Nassick	18	Rajcote	25
Belgaum	19	Kutch	26
Dharwar	19	Kurrachee	26
Kolapoor	20	Hydrabad	27
Rutnagherry	20	Shikarpoor	27
Honore	21	Kotree	28
Vingorla	21		

APPENDIX—

Vaccination under Superintendents in British Territory	Table No. 1
Vaccination under ditto in Native ditto	No. 2
Vaccination under Civil Surgeons	No. 3
General Abstract of Vaccination	No. 4
Table of Ages	No. 5
Employment Returns of Superintendents of Vaccination	No. 6

VACCINATION UNDER SUPERINTENDENTS.

PRESIDENCY DIVISION.

Local Superintendent.—Sub-Assistant Surgeon ANUNTA CHUNDROBA

Establishment.—Three Vaccinators.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	6,081	....	....	4,748	78·1
1863....	7,016	935	....	5,494	78·3

During the past year 7,016 persons were vaccinated, being 935 more than in the preceding year. Of these 4,062 were males, and 2,954 females; 4,302 were above, and 2,714 under one year of age; 4,208 were Hindoos, 1,017 Mahomedans, 977 Christians, 663 Parsees, and 151 of all other castes. Of the total number of operations 5,494 were successful, 658 unsuccessful, and 864 doubtful, giving 78·3 as the percentage of success.

Small-pox prevailed to a great extent at the commencement of the year, and the number of applicants for vaccination was correspondingly great, but as there was little or no small-pox during the last month, the number fell off to an equally great extent, and consequently the total for the year was not what would have been expected from the extensive prevalence of small-pox.

CENTRAL CIRCLE.

Superintendent.—Assistant Surgeon T. B. BEATTY, M.D.

Establishment.—Thirty-one Vaccinators.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	39,701	....	....	36,872	92·8
1863....	48,562	8,861	....	45,008	92·7

The working of the establishment during the past year has been attended with marked success, as 48,562 children have been operated on, showing an increase in the past over the preceding year of 8,861.

This increase I attribute to greater activity on the part of the vaccinators, and to the assistance they have received from the Collectors of Poona, Sholapore and Khandeish, who, with much consideration, have granted, as a temporary measure, a peon to accompany each vaccinator. In the Collectorate of Nuggur, peons were given on the payment of Rupees five (5) per month for each. In the Tannah Collectorate no peons were granted. This aid was only granted during the months of November and December, but the increase was at once perceptible compared with the returns of the previous month, those of November exceeded by over 900, and in December they still further increased by 1,800 cases. The average number per month previously being 3,500.

There can be no question of the benefit which will result on peons being permanently sanctioned. The great object gained thereby will be the time saved in collecting children for the vaccinators. They will likewise prove a check, in some degree, to false returns of numbers being sent in, and my experience proves that the presence of a peon with each vaccinator imparts confidence rather than intimidation. In fact, amongst the very poorer classes, a peon represents the Sircar, and they feel security in any undertaking when a Government peon is present, and in their eyes in a measure responsible.

But perhaps the principal cause to which the increased work of last year may be ascribed, is a method I adopted of arranging personally for the vaccination of children in the districts through which I passed. After having first inspected the work and registers of the vaccinator, and satisfied myself as to the quality of his lymph, my plan was to proceed in advance, visit all villages and towns, and collect all the children of each. With the help of the patell, and kulkurnee, a list of all unvaccinated children was made out, signed, and forwarded to the vaccinator who would subsequently follow. Thus a double object was effected. The old excuse resorted to regarding opposition offered by the people, or scarcity of subjects, was at once done away with, and from my knowledge of the numbers ready for vaccination, I was in a position to judge whether each man performed a fair amount of work. Time was saved also, the vaccinator was not obliged to delay, for immediately on visiting each village all necessary preliminary arrangements had been made. This method was attended with excellent results. The returns of several of the most indolent men became nearly trebled.

The average number of persons vaccinated by each man was 1,566, or at the rate of 130 operations per month, I have every reason to expect that on the permanent establishment of peons this number will become largely increased.

The Bheel tribe, who formerly were the most violent opponents, now readily accept vaccination, and except in the very wildest parts of the Satpooree hills and western districts of Khandeish they offer no resistance. It is my intention to visit these districts as early as possible. Mr. Ashburner, the present Collector, has rendered me every assistance, and vaccination has never been attempted as yet amongst these wild races. I anticipate but little difficulty, as with these people it is only ignorance and not bigotry which has to be overcome.

The number of children, under one year old, vaccinated was 6,152, a comparatively small percentage, being 12·51 of the whole, or in other words, every seventh person was operated on during infancy. This was exactly in the same proportion as last year. The people have an extreme aversion to have their children meddled with before they are able to walk, unless compelled; they never take them out of doors during infancy, and no persuasion will induce

the generality to submit them for vaccination. They entertain a belief that teething is as much as an infant can endure, and dread any additional fever likely to be consequent on vaccination.

Of the total number vaccinated 45,008 were successful cases, being a percentage of 92·7. I believe that this is as near an approximation to truth as possible. Every means have been taken both by the Deputy Superintendent and myself to test the accuracy and truth of the men's returns, and in addition they have from time to time been verified by the Collector's assistance. With one exception they have invariably been found correct.

A great boon has been conferred by Government in sanctioning the sum of one Rupee per month to each vaccinator for the purpose of conveying fresh matter from village to village. The old system of trusting to lymph on glass and points was attended with delay and frequent failure. When vaccinating with dry lymph, even a clever operator could not calculate on more than one successful case in six. He was obliged therefore on visiting a new village to wait for a sufficient number of fresh vesicles, and great delay was thus occasioned. There is no doubt too that the people lost confidence in a great degree, observing several operations performed followed by no pustules. The case is different now. In every village two or three children with fresh matter can be easily obtained for a small remuneration, and for the future unsuccessful cases should invariably be the exception.

I would beg to offer a suggestion as to the advantage of supplying Superintendents of Vaccination annually with empty tubes in lieu of the square glasses and ivory points supplied by the Medical Storekeeper. Vaccinators could be easily instructed in the method of filling them, and a constant and certain supply of vaccine matter would at all times be available for transmission to the Presidency and other distant parts.

The Principal Inspector-General's Circular, No. 2037 of 1863, dated 8th September last, impressing on Superintendents of Vaccination the necessity of bearing in mind the wish of Government, conveyed in paragraph 4 of Resolution 1131, dated 27th July, has not been lost sight of, and when travelling through the districts I have been at much pains to try and collect facts regarding the protective power of vaccination, such as I formerly brought to notice, sufficiently striking for publication, as yet I have failed in meeting with such; but in addition to my own inquiries the Collectors of each district have been written to, and requested to obtain through the mamlutdars information on the following points:—Whether any remarkable out-break of small-pox took place in any town or village during the year, and if so with what results. In what proportion death and disfigurement (such as loss of sight) occurred amongst the vaccinated compared with those unprotected; the result of this inquiry will be communicated hereafter.

SOUTHERN CIRCLE.

Superintendent.—Assistant Surgeon F. H. PLUMPTRE.

Establishment.—Twenty-seven Vaccinators (Government).
Nineteen Vaccinators (Native Chiefs).

	Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government ..	1862....	30,405	....	....	28,521	93·8
	1863....	28,680	....	1,725	26,992	94·1
Native Chiefs ..	1862....	16,734	....	....	14,871	88·8
	1863....	15,319	....	1,415	14,288	93·3

I regret that the above table presents a falling off in the number vaccinated during the past year, but there are circumstances which tend to account for this, without implying any additional opposition to the progress of vaccination, among the population, or special indolence on the part of the executive staff of the establishment.

The year under review was no ordinary one to be contrasted with, as in the year preceding, when under the superintendency of Dr. Asher, the number vaccinated amounted to an increase of 5,014.

The past year has been one of hard trial to the whole establishment from the high prices of provisions prevailing through all the zillas of this Circle, telling most seriously upon all classes of public servants receiving rates of pay so low as that of the vaccinators. I have received during the year numerous letters from members of the establishment, on the difficulties they have had to contend with on this account. This general dearness has led to two results, both of which would tend materially to interfere with the progress of work. Many have been obliged to give up keeping a tattoo, and secondly I believe the vaccinators have been induced to remain longer than they should have done in those localities, which possessed the attraction of grain selling for a seer or two cheaper than in others. It has only been by my exercising a strict inquiry on every occasion when returns have been unsatisfactory, that I have been able to keep up the numbers to what they have been. Under these circumstances the gross return cannot be regarded as unsatisfactory, for although there is a decrease as compared with 1862, yet contrasting it with the year preceding that (1861), there is an increase of 3,289.

I have now to refer to one change which, though not immediately affecting the present establishment, must be regarded as of the highest importance, and which, to a certain extent, will influence the future working of the Government vaccinators in this Circle should the plan be extensively carried out in the other zillahs. I allude to the introduction of the system of Municipal Commissions employing at their expense vaccinators in their Municipalities. This was first suggested in paragraph 80 of the Report on vaccination in this Presidency for 1862 by the Principal Inspector-General Medical Department, and further recommended in para-

graph 9 of the Resolution of Government on that Report. From my previous experience in the Central Circle as well as in this, I immediately saw the numerous advantages such a plan possessed, which may be summed up as follows:—

1*stly*.—That in proportion to the population, the amount of vaccination performed in the large talooka towns is very much less than in the small villages. This I attribute to the fact that in large communities, a perfectly gratuitous boon is rarely appreciated, but directly it is one which the community collectively pay for, they are then anxious to obtain a return for their money. To this must also be added the knowledge among the residents of these towns, that should an epidemic of small-pox break out, they can obtain at once the aid of a vaccinator,—a benefit which small villages under similar circumstances would be deprived of, owing to the great inconvenience these changes in the regular tour of a vaccinator produce.

2*ndly*.—It would deprive the Government vaccinators of the excuse of always keeping in the neighbourhood of the large towns, which they are too disposed to do, on the plea of having work in them, and thus depriving the remoter villages of their services.

The proposal of His Excellency the Governor that permanent vaccinators might be kept by the large Municipalities, I saw could hardly be made applicable to any of the Municipal towns dependent on my establishment for vaccination, owing to the smallness of their populations, and the expense which a permanent vaccinator would of course entail. A modification of this appeared advisable, and I suggested that the large Municipal towns should employ a vaccinator for two or three months every year, at a cost of about Rs. 30. The vaccinator I proposed to furnish from my list of candidates.

This scheme I laid before Mr. Chapman, the Collector of Sattara, soliciting his co-operation in carrying it out. Mr. Chapman in doing so has materially improved upon my plan, by making a more perfect organization of the system. He has grouped several Municipal towns together, terming them divisions, of these he has established, as an experimental measure, six, giving to each division one vaccinator, and retaining him permanently on a salary of Rs. 15 a month. The size of these divisions will permit of all the towns in them being visited once every three months. The plan thus carried out in Sattara I have recommended to the consideration of the Collectors of the other Zillahs in this Circle, but, with the exception of Rutnagherry, have received no reply. It appears that in the Zillah of Rutnagherry there are no Municipal towns. Having once started the plan, I propose to leave the vaccinators entirely under the control of the Municipal and Civil authorities. Every thing connected with the system of verifying returns must be left to them, as the work of my office is already as much as can be attended to by only one karkoon. The only way I shall interfere with them will be to call for a monthly numerical return for statistical purposes, and as opportunity occurs, to inspect the quality of the lymph they use.

From all I can gather it appears that prejudice is on the decline in this Circle, and as far as my own experience extends, there seems little positive active opposition, but a great deal of apathy and indifference existing, which requires either the presence of authority or the scourge of an epidemic of small-pox to overcome. There is a marked contrast in this respect between the population of the Deccan and that of the Konkun, as with the latter vaccination may be regarded as popular.

The following will illustrate the description of apathy or prejudice existing. During my recent visit in the territories of the Chief of Koorundwar, the vaccinator reported to me that at a large village named Ahlus, near Koorundwar, he had never succeeded in obtaining a single child for vaccination. I wrote to the chief karbaree (a superiorly educated man)

asking him to accompany me to the village. A morning was fixed, and two children with fresh vesicles sent to the village. On our arrival there, the inhabitants were collected at the Chowdry, and were addressed by the karbarree and my karkoon on the benefits and nature of vaccination, and within half an hour some forty children were brought forward to be vaccinated, a result which I much doubt would have been produced, but for my being on the spot; indeed during the week I was at Koorundwar, owing to the stimulus it gave the native officials by my directing the Chief's attention to the subject, nearly as many children were vaccinated in that time as is usually done in that State in a couple of months.

Some time ago, acting upon a suggestion of His Excellency the Governor in the last Resolution on this subject, I drew up a form of notice or hand bill, containing a simple statement of facts descriptive of vaccination, such as might easily be understood by the uneducated mass of the people. This form having been approved of by the Principal Inspector-General Medical Department, was forwarded by me in the early part of November last to the Oriental Translator to Government, for the purpose of being translated into Murathee and Canarese, but in consequence of the great delay in receiving these translations, I have not yet been able to issue them.

NORTHERN CIRCLE.

Superintendent.—Assistant Surgeon R. DICK.

Establishment.—Thirty-two Vaccinators (Government).
Ten Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government	1862....	38,160	....	....	33,915	88·8
	1863....	49,346	11,186	....	43,629	88·4
Native Chiefs	1862....	13,746	....	....	11,977	87·1
	1863....	16,317	2,571	....	14,156	86·7

The number of operations recorded by the present establishment of 32 Government and 10 Native Chiefs vaccinators in 1863 as shown above, contrasts favourably with their work in the previous year. During the year just terminated, vacancies and interruptions of work from sickness have been less frequent and less prolonged than in the preceding one, while more effectual assistance has been afforded by the village officials in consequence of the strict orders issued by the Civil authorities, and at the same time several of the vaccinators have worked with more zeal than formerly. The increase is most marked in the Kaira zilla, and there also the returns are largest, vaccination being more appreciated than in other parts of the Division, while more effectual assistance in the way of peons, &c., is afforded. If the same assistance had been available in other zillas, more especially in Surat, I have no doubt that the exertions of the vaccinators would have been rewarded with much greater success.

The proportion of successful cases is rather lower than in the previous year, but as new lymph has been introduced over a great part of the Circle, and I hope will soon be disseminated over the whole, I anticipate great improvement in the result in future years. As far as I can learn, all previous attempts to renew the lymph in Guzerat have failed, and therefore that in use up to the present time must have been in course of transmission from subject to subject for more than forty years, so that now a fair opportunity is afforded by comparing the two kinds to form an opinion as to whether vaccine lymph does or does not degenerate in the course of years. In the case of the old lymph failures are frequent, the vesicles are small, many of them ill developed, and contain a scarcely appreciable quantity of lymph and leave cicatrices which not unfrequently disappear entirely or nearly so in a few years, whilst in the other case failures are rare, the vesicles are large, perfect in appearance, and contain abundance of lymph, and leave scars which promise to last for life. Some cicatrices of ten or twenty years standing which I have seen in Guzerat are much more distinct than those of late years, and I am therefore inclined to think that deterioration has taken place principally during the last few years. Whether the prophylactic power of the virus has been impaired is a question which can be decided only by observation, but I fear that in this respect the result will prove less satisfactory than would be desirable. Statistics show that to confer the utmost possible immunity from small-pox well marked permanent cicatrices are essential; and they also seem to show that the degree of protection is in direct proportion to the quantity of lymph, or at all events to the number of perfect vesicles that have formed, for four vesicles confer more perfect immunity than three, three than two, or two than one.

No instance of inoculation came to my knowledge during the year, but I have just received information (February 1864) from which it appears that this system is being practised at present in Bulsar purgunna. That this practice is the favourite in that district seems probable from the extreme unwillingness of the people to accept vaccination: this they manifest by concealing their children, by deserting their dwellings, when the vaccinator visits them, and they occasionally resort to measures of intimidation by reminding him of the beatings which other vaccinators suffered when employed in the district. The bias of the villagers for vaccination or inoculation depends in a great measure, sometimes entirely, on the patell; and he being perfectly indifferent, affords his support to the inoculator in consideration of the fees which he receives. A simple and effectual way to put a stop to the system, I submit, would be to hold the village officials responsible, as they must always be aware of the inoculator's movements, and to punish them.

The measure under the consideration of Government for granting travelling batta to vaccinators would be found a most valuable one for extending the practice of vaccination. From the Annual Report of 1857, it appears that in the first year after batta was granted to the vaccinators in Sind the number of operations was between twice and three times larger than in the preceding year, and although the numerical increase in this division could scarcely be so large, still great benefit would result by enabling the vaccinators to meet the expenses of travelling, and affording them an inducement to visit a larger number of villages, and to go over their districts more frequently, and thereby to confer the benefit of the prophylactic on the rising generation at the earliest possible age, and to reduce the number of unprotected persons to a minimum. The increased emolument would also add to the vaccinator's prestige in his district, and attract a superior class of men into the service.

During the year an attempt was made to cause the village officials to prepare a list of all unprotected persons in their villages at the time the vaccinator was about commencing operations. This would seem a perfectly legitimate duty, and one not entailing much trouble

to persons having some authority in the village and acquainted with the people; but the result was such as to convince me of the determination of a large majority of those persons, especially of the tullatees, to afford no active assistance to this Department. Nearly all neglected to prepare these lists, and when called to account stated that they had given them to the vaccinators, or that they were not asked for them, or that the people denied that they had any unprotected childern, &c. In one instance a tullatee prepared an indiscriminate list of persons in his village, of whom many had no children, and many had no unprotected children, while the names of several persons who had unprotected children were omitted. On the other hand, one vaccinator was much surprised at being supplied with these lists, and also at receiving active assistance from the patels in several villages where he was working, and the cause of this it seems was that one patel had been suspended for some months the previous year for neglecting to make a requisition for the assistance of a vaccinator when small-pox was prevalent in his village. It is much to be regretted that the difficulty of proving complaints against patels and tullatees is so great, because occasional punishments induce these officials to afford active support to the vaccinators, and when this is afforded work almost invariably goes on satisfactorily, while without it very little progress can be made.

On the 1st January 1863 I was at Sannud, thence I travelled to Verrumgaum and Mandul, after that through the Palunpoor States, where I visited Sumee, Deodur, Babur, Wan, Deesa, and Palunpoor. I then travelled southerly through the Mahee Kanta and through Morassa, and afterwards visited Kuppurwunj, Jeytulpoor, Kaira, Neriad, Napar, and Borsud, examining the work of the vaccinators in the different districts. During and after the monsoon I examined the work of the vaccinators in Chorassee and Oolpar, then crossed to Gogo, and travelling into the Dhundooka district, I examined vaccination in and around Burwalla and Dholera. I then travelled into the Dholka district, where I was when the year terminated. In this tour I examined the work of 20 Government and 9 Native Chiefs' vaccinators, some of the latter had not been inspected for years, and one had never been visited, although he had been employed for nearly eight years in his district. In verifying their returns I failed to discover any false names recorded, and although in some cases when examining the children there was a larger number of persons reported absent by the patels than I could have wished, still I am satisfied that falsification does not take place to any great extent. The patels seem frequently to take no trouble in ascertaining the correctness of the numbers in the Form V 2 which they attest, sometimes relying on the vaccinator's statement and at others even signing the blank form and allowing the vaccinators to fill in the numbers afterwards.

SIND DIVISION.

Superintendent.—Assistant Surgeon J. PINKERTON, M.D.

Establishment.—Fifteen Vaccinators (Government).

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	42,282	....	....	40,296	95·3
1863....	39,443	....	2,839	37,791	95 6

The chief reason of the decrease is the same as given in last Report by Mr. Martin, viz: "The ordinary zillahs of the Province have, during the past six years, been fairly worked over. Numbers are certainly affected by this circumstance." The death of one of the old vaccinators, early in the year, has also slightly affected the total of the operations. Four of the vaccinators were on the sick list for a short time, and their work is less on that account. To obtain any thing approaching to the high numbers obtained a few years ago, a vaccinator would require to work much harder, and travel much further than was required in the earlier years. From the accompanying table it will be seen, that although the number of towns gone over is greater year by year, the amount of work is less, clearly showing that there are not now so many children available for vaccination as there were formerly.

TABLE *showing the Number of Operations performed, and the Number of Villages visited, in each Month of the year* 1863.

MONTHS.	1860.		1861.		1862.		1863.	
	a	*b*	*a*	*b*	*a*	*b*	*a*	*b*
January	250	5,992	306	5,687	237	4,669	245	3,587
February....	216	5,410	236	5,605	288	4,864	214	2,963
March	233	5,884	228	4,512	251	4,414	181	3,322
April	301	6,785	214	3,841	227	3,789	228	3,480
May.....	297	6,826	208	4,608	193	3,297	229	3,350
June.....	197	5,810	176	3,376	253	4,043	227	2,869
July.....	162	3,151	261	4,541	192	2,812	206	2,808
August.....	126	2,311	151	2,947	211	3,082	179	2,589
September ..	141	3,233	197	3,074	180	2,693	214	3,145
October	195	3,945	210	3,192	207	2,498	244	3,432
November ..	258	4,798	180	2,507	220	3,087	307	4,208
December ..	249	5,423	293	5,271	258	3,034	247	....
Total....	2,614	59,568	2,660	49,161	2,717	42,282	2,721	39,443

(*a*) Number of villages visited. (*b*) Number of children vaccinated.

I think it may be stated that there exist no very serious obstacles on the part of the people in Sind generally to the spread of vaccination, but at the same time I am of opinion that the majority submit their children to be vaccinated, more because they know that Government wish them to do so, than from any desire of their own to protect their children from small-pox, and I fully believe that if the people were not influenced by the known wish of Government, few comparatively would be vaccinated; it is true that generally the people are acquainted with the prophylactic power of the *virus*; still indifference, and among many Hindoos positive aversion to vaccinating their children exist. I have made many inquiries on this subject, and find that one substantial reason every where exists for objection, viz. the objection that a parent naturally has to carry his child from his home to another village for the purpose of supplying lymph wherewith to vaccinate others; in many places I have been told by the people, "we have no objection to have our children vaccinated, but object to carry our children to other villages, and to have the lymph taken from the vesicle to vaccinate other children." Among many Hindoos there are objections to every thing in connection with vaccination, for reasons which are well known, but it is pleasing to be able to state that the Brahmins and other influential Hindoos as well as Mussulmans in Tatta gave me every assistance in persuading the ignorant, and set the example of submitting their own children to be vaccinated; the Bhatias of that town are incorrigible, and I believe they are every where the same in Sind, as regards vaccination, but they are only a small body. The Brahmins object to let the lymph be taken from the arm, apparently from no other reason than the fear of giving the child pain: at present in Sind no other method of carrying on vaccination exists, than from arm-to-arm, and it is still doubtful if tube-lymph will remove the necessity for always carrying a child with the vaccinator. To diminish the inconvenience arising to parents from having to carry their children to other villages, I have given strict injunctions to the vaccinators, that they shall never take a child further than is absolutely necessary, and always to pay the parents in cash, for the loss of the wages of labour for the time they may detain them. To ensure as much control in this matter as I possibly can, I have issued a circular on the subject, and instructed each vaccinator to send me a weekly report, from which I can form a tolerably correct notion of his movements, and of his payments to parents. In the month of September I visited Colonel Green (then Acting Commissioner) in Kurrachee, and in a conversation regarding the introduction and spread of vaccination in the Northern Frontier District he said that the Beloochees there had as much aversion to vaccination as they had years ago, that he had personally endeavored to persuade some of them to submit to vaccination, but had not succeeded, and that probably any attempt to spread vaccination there at present will be unsuccessful. I have not yet visited that district, and personally know nothing of the feelings of the people, but I think if Colonel Green could not persuade them, it is not likely I will be able to do so.

There are several ways of testing the truthfulness of the vaccinators' reports:—1*st*. By making the vaccinators send the crusts to me; 2*nd*, By asking the Collectors to ascertain by means of the Nominal Roll whether the children have been vaccinated or not at the various villages; and 3*rd*, By the Superintendent visiting the different fields of operation of the vaccinators. The first method by crusts is clearly liable to objection, because a vaccinator might take a dozen crusts from one child and represent them as taken from so many children, besides a vaccinator could not always get the crusts—this method then could only be useful in ascertaining that vesicles had been formed, but could not afford any actual test of the number vaccinated. The second method involves the employment of Native subordinate officials, and it is not in the nature of things to expect they could discriminate between good and bad vaccination. There is another great difficulty,—suppose a vaccinator is employed in a place

where vaccination had been carried on two or three years previously, and he appropriates the names of children previously successfully vaccinated. When the Native official went to the place it would turn out that the children were vaccinated, but it is not likely that he would take such trouble as to discover those who had been vaccinated by the vaccinator whose work he might be testing, and those who had been vaccinated years before by another vaccinator, hence this method is also open to objection. The third method is the only one which I consider offers a certain test both of the truth of the Register and of the character of the work performed; I have therefore adopted that course alone. This method is very simple and only requires a great deal of patient labor, but the result amply repays the trouble, for it demonstrates the actual state of the work performed by the vaccinator whose work is under examination, and gives great opportunity for the Superintendent obtaining correct information regarding the conduct of the vaccinators in their intercourse with the people, and this latter point requires some attention. When I first began inspecting, I was content with merely seeing as many children as were collected, and drawing a very general conclusion, because I seldom ever saw as many children as had been reported, hence I determined to abandon such a loose method of testing the reports, and adopted the following plan. At every village where I go to inspect work, I generally first call over the names of the reported children either to the patell, zemindar, mookhee, or some person who was present at the time the children were vaccinated; while the roll is being called over the children are collecting. I make a mark against the names of children of whom they deny the existence; second, when the children are assembled the names are again called over, and I see each child's arm as his or her name is called, and the result, successful or otherwise, is noted, or if they have not been vaccinated that fact is noted; in short, whatever the result may be, it is marked down in the Nominal Roll.

With reference to Circular No. 2037 of 1863, dated 8th September 1863, of Principal Inspector-General Medical Department, calling for a notice of "any striking facts regarding the protective power or success of vaccination, in order that it may be widely made known by being published in the vernacular of each District, &c." I cannot say that any special case has come to my notice during the past year, but I can state, that after having travelled over the greater part of Sind, and after having personally examined thousands of children and hundreds of villages, that a man only requires to travel from the one end of Sind to the other with his eyes open to read in the faces of the rising generation what the benefits of vaccination are to this Province. Here almost every adult is marked with small-pox, and a great portion of the population below ten years old are vaccinated and have escaped small-pox; it is true a great many below ten years old are marked, but few marked were vaccinated, no doubt some who were vaccinated are also marked by small-pox. After many inquiries, and no little pains taken to find out, I can say that I have never heard of a single successfully vaccinated child having died of small-pox; I know that a few unsuccessfully vaccinated children have died of small-pox. What the deaths from small-pox must have been among a population, whose every adult's face is marked, may be imagined. I will keep the object of the Circular in view, and if any thing worthy of being reported occurs, I will report it.

KATTYWAR CIRCLE.

Superintendent.—Assistant Surgeon E. R. BUTLER.

Establishment.—Eight Vaccinators (Government).
Twenty Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government ..	1862....	5,085	....	....	4,623	90·9
	1863....	5,415	330	....	4,951	91·4
Native Chiefs ..	1862....	16,933	....	....	14,953	88·3
	1863....	15,704	....	1,229	14,099	89·7

For the year 1863 the total vaccinated as per Returns is 21,119, making a decrease on the year 1862 of 899. The falling off is with the Chiefs' vaccinators, the total by Government vaccinators shows an increase on last year. I have reason to believe both from ocular demonstration, and from the numerous complaints made by my assistants that the decrease is now almost entirely owing to the indifference, laziness, and religion of the people.

Major Keatinge, V. C., Political Agent, Kattywar, has afforded every assistance in his power. He has written to the Chiefs to request their countenance and assistance, and has had a copy of last year's report, with the remarks made by His Excellency the Governor, translated and forwarded to each, whilst he has never failed to impress upon them in conversation the necessity of using their influence that the people may be vaccinated. The Chief of Pulitana, before having his only child vaccinated, had his intention reported about, to make as much impression as possible, so that many persons might witness the operation, but without effect; indeed without force being used, they do not bring their children to be vaccinated, unless small-pox breaks out, when they readily consent.

I visited as many of the assistant vaccinators' work as I could during the few months I was in the districts. January and February I was detained in Rajcote on duty—Dr. Johnson, the only other Medical Officer at Rajkote, having been sent to England on sick leave; again, after the rains I was detained by duty till the 8th of November, so that altogether I was only five months on inspection duty.

Besides visiting the talookas as mentioned above, I had interviews with several Chiefs for the purpose of persuading them to let vaccination be carried on in their talookas. I am happy to state, since my visit, the Sajickpore Chief has allowed the Sœla vaccinator to operate on the children in his villages; the parents however strongly objected, and at one place—the second in which the virus was propagated—the parents ran away with their children into the jungle, when the vaccinator returned to propagate the infection: fortunately by my explaining and remonstrating, they on the following morning brought back two of the children. The Luktur Tarquor has also agreed to entertain a vaccinator.

REWA KANTA CIRCLE.

Superintendent.—Assistant Surgeon A. W. G. ADEY.

Establishment.—Five Vaccinators (Government).
Seven Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total. Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government ..	1862....	1,923	....	....	1,643	87·5
	1863....	3,002	1,079	....	2,714	90·4
Native Chiefs ..	1862....	4,671	....	....	4,005	85·7
	1863....	4,089	....	582	3,614	88·4

It will be seen that while there has been an increase in the number vaccinated in the Punch Mahals during this year over the last, there has been a considerable decrease in the Rewa Kanta. This is partly attributable to there having been fewer assistant vaccinators employed this year than there were in 1862. Last year in Rajpeepla, according to Dr. Dick's return, there were five vaccinators employed by the Raja, while this year he has only employed three. In Oodeypoor for nearly two months the vaccinator was sick, and in October he went away without leave of absence, and has not since returned.

In Sunkera the Native Chief refused in August last to pay anything whatever for carrying on vaccination, the assistant vaccinator was consequently discharged. Sunkera therefore has not been included in this year's returns. The districts inspected by me this year have been Dohud, Jhallode, part of Godra, and part of Rajpeepla. I went in April with the late Assistant Political Agent to Soanth and Ranapore, and endeavoured to induce the Raja of Soanth to entertain an assistant vaccinator, but he declined.

In Dohud and Jhallode, and contiguous districts, the country is hilly, and the villages—inhabited mostly by Bheels—are small and widely scattered, and in the hilly parts especially some difficulty is found in inducing the Bheels to submit to vaccination. The assistant vaccinator is more successful in those villages where a few Rajpoots are located with the Bheels. In Godra, a more thickly populated district, most villages contain a considerable number of Rajpoots and Koonbies, and no complaint is made of difficulty by the assistant vaccinator. There is of course in Rajpeepla and all other hilly places the same difference in their appreciation of vaccination between the hill Bheels and those of the plains.

PEYNT (NASSICK).

One Vaccinator under Sub-Assistant Surgeon SUMMERS.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	148	....	....	100	67·5
1863....	305	157	....	177	58·0

It is satisfactory to report that the assistant vaccinator who joined the Peynt State in June 1862, has shown much zeal in the performance of vaccination during the past 12 months; the excess in the total number vaccinated the past, compared with the previous year, amounts to 157, of the total number vaccinated 128 are shown in the return as unsuccessful, for which no cause is assigned in the vaccinator's Muratha report. The people in the district are desirous of availing themselves of the benefit of vaccination, but averse to bring the children to show the result.

VACCINATION UNDER CIVIL SURGEONS.

TANNA.

Assistant Surgeon J. G. ASHER, M. D.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	38	....	....	9	23·7
1863....	71	33	....	61	85·9

The work returned for last year has been accomplished through the agency of the Civil Hospital Establishment, and is satisfactory in results though far from so in quantity.

Whenever I can see a chance of succeeding, I shall attempt to have a special vaccinator for the town entertained by the Municipality, and by this means perhaps such indirect sanction and support of vaccination by the more influential natives, who constitute Municipal Commissioners, may not be without its small effect for good.

POONA.

One Vaccinator under the Civil Surgeon, Surgeon R. G. LORD, M. D. (Acting.)

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	1,832	....	....	1,535	83·7
1863....	1,918	86	....	1,587	82·7

The assistant vaccinator appears from his reports to have carried on work regularly and diligently for the past year. There is a trifling increase in the total numbers operated on, and in the proportion of female children, though why the latter should be so many less than the males, I am at a loss to understand. In former days, if occurring in a Rajpoot State, it might be looked upon as indicative of the practice of female infanticide, but in Poona no such cause can be supposed to exist, and there must be some disinclination on the part of parents to submit female children to the operation.

AHMEDNUGGUR.

One Vaccinator under the Civil Surgeon, Surgeon J. G. FRASER, M. D.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	1,240	....	....	1,010	81·4
1863....	1,260	20	....	1,017	80·7

During the year 1863 as compared with the preceding year 1862 there has been an increase of 20 persons vaccinated, the total number of vaccinations being 1,260, there has also been an increase of 7 in the number of successful cases, the percentage of success being very nearly the same as for the preceding year 1862. The decrease during the year 1862 as compared with the preceding year 1861 was accounted for by the great prevalence of cholera from the month of March to the month of June 1862, and the increase for the year embraced in the present report may be similarly accounted for by the absence of cholera during almost the whole year 1863; very few cases of small-pox having occurred within the same period, either in the city of Nuggur or its immediate neighbourhood.

SATTARA.

One Vaccinator under the Civil Sugeon, Asst. Surgeon H. V. CARTER, M.D. (Acting.)

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	1,435	....	....	1,265	88·1
1863....	3,832	2,397	....	2,924	76·3

The above table includes the whole of the past year. It shows a very large increase indeed on the numbers of previous and some late years (amounting to upwards of 60 per cent. in the former) and may be regarded as furnishing satisfactory evidence of the efficiency of the assistant vaccinator as well as of the desire of the people to partake of the advantages held out to them in preventing sickness. The report of my predecessor, which is here included,

for the first nine months of the year, shows that during that time, as in the last three, there was a continuous increase in the number vaccinated. Dr. Cook has also noted that the lymph was generally good, and the same remark may now be made, although the vesicles I have seen have not been large. The large number vaccinated in the past year seems to be accounted for by the unusual prevalence of small-pox in the districts around Sattara, which has induced the inhabitants to seek more freely the desired protection. Such is the statement of the vaccinator, I have no means of verifying it, but think the explanation reasonable.

Small-pox has not prevailed as an epidemic in the town of Sattara during the past year, and though my experience in this locality is limited, I consider that the opportunities for vaccination are sufficient to place this prophylactic measure within easy reach of the people.

SHOLAPORE.

One Vaccinator under the Civil Surgeon, Asst. Surgeon C. F. Ogilvie, M.D.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862..	1,392	....	....	854	61·3
1863..	1,438	46	....	819	56·9

During the past year the number of persons vaccinated has amounted to 1,438; of which 754 were males, and 684 females; 420 were children under one year, and 1,018 children above that age; 819 were successful, 336 unsuccessful, and 283 doubtful, the percentage of success being nearly 57.

As compared with the previous year there is an increase of 46 in the total number of operations, but the percentage of success does not contrast favourably with last year, that having been 61·3; but I would remark, that although the percentage of the last two years is very small, it may be accounted for in this way. I very carefully examine the result of the operations twice weekly, and if through the carelessness of the parents, the pustules are destroyed, these are returned, as unsuccessful, and are again vaccinated. This will also account for the large proportion of cases returned as doubtful. It is most probable that most of these would have been successful, if proper care had been taken of the arm in the first instance. My reasons for making this assertion, are, that in no instance where I have myself performed the operation has it proved unsuccessful. Of the various castes the Hindoos have been the most numerous, viz. 787, next Mussulmans 410, and other castes 240. Only one Christian is reported. The lymph has been of good quality throughout the year, the virus being apparently as effective during the monsoon, as in other seasons, and the supply has been uninterrupted.

DHOOLIA.

One Vaccinator under the Civil Surgeon, Assistant Surgeon C. R. COLSTON.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862	857	....	....	796	92·8
1863	732	....	125	655	89·4

Vaccination has been performed twice a week in this station during the past year, with about the usual result, and great care has been exercised in selection of cases for propagating the virus; the usual apathy and passive opposition have been experienced, and the difficulties in obtaining subjects for Vaccination have increased, the Vaccinator making incessant complaint that he does not meet with the necessary assistance from the Native official whose duty it is supposed to be to seek out the unprotected. The return furnished monthly by the mamlutdar confirms the vaccinator's statement, as the latter succeeds with perseverance and difficulty (having no peon allowed now bearing the insignia of authority) in hunting out at least fourfold the number returned as unprotected by the former.

NASSICK.

One Vaccinator under Sub-Assistant Surgeon A. SUMMERS.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	854	....	....	629	73·6
1863....	570	....	284	426	74·7

During the year just expired the number of children vaccinated has been less than the preceding year, which exhibits a total of 854, and for the year 1863 the figures are 314 males and 256 females, making a total of 570, less by 284 compared with the preceding year. This is attributed to the difficulty of procuring subjects for the operation, owing to the want of the aid of a peon, who was removed in April 1862.

BELGAUM.

One Vaccinator under the Civil Surgeon, Surgeon G. G. W. MAITLAND (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	556	....	....	542	97·4
1863....	547	....	9	536	98·0

During the past year 547 persons have been vaccinated in the town of Belgaum. Of these 536 were successful, 9 unsuccessful, and 2 doubtful. Taking into consideration that the population of Belgaum is upwards of 30,000 persons, the amount of work performed is not satisfactory. The want of a peon is one cause ascribed for the paucity of vaccinations, and judging by former experience, I am inclined to believe a peon, to assist the vaccinator in collecting subjects and arranging for their re-appearance at stated intervals, very essential to the well working of the system. Small-pox as an epidemic has not manifested in either of the towns of Shapoor or Belgaum during the past year.

DHARWAR.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. MENNIE.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	1,478	....	....	1,316	91·0
1863....	1,080	....	398	971	89·9

Throughout the year the vaccine lymph continued in good condition, and never failed, and judging from the appearance of the vesicles it did not deteriorate in character. The conduct of the vaccinator is satisfactory, and his work carefully performed. The total number of persons vaccinated during the past year was 1,080, while in 1862 there were 1,478. The above table will therefore show that there has been a decrease in actual figures of 398 in the returns of this, compared with the preceding year. Of the number vaccinated there were 971 successful cases recorded, or 89·9 per cent. on the whole. 853 were above the age of one year, and 227 under one year. The decrease in the number vaccinated may be accounted for from the fact that small-pox did not prevail in an epidemic form during the year, so that the natives were not so willing or anxious to have the benefit of vaccination, excepting in the month of January, when a few cases of small-pox occurred in the town, and 104 children were vaccinated in this month.

KOLAPOOR.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. MILLS.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	2,879	....	....	2,737	95·0
1863....	3,022	143	....	2,945	97·4

The progress of vaccination during the past year has been satisfactory. In 1862 there was an increase of 63 over the average of the five preceding years, but of only 2 over 1861. In 1863 there has been an increase of 271 over the average of five years, and of 143 over 1862. The monthly average of vaccinations has been 252, but during February, March and April it was greatly in excess of this number. The average during three months being 4$\frac{2}{3}$4. The fears of the people were excited by the prevalence of small-pox, and a great stimulus was thereby given to vaccination. I have again the pleasure of recording a considerable increase in the proportion of successful operations; in 1862 they increased from 92·3 to 95 per cent., and during the past year they have reached 97·4 per cent., but only 6. cases are actually known to have been unsuccessful, the remaining 71 are cases in which the children have not been seen after operation, and of which it is fair to conclude that a very large proportion were successful,—a conclusion which is supported by the fact that out of 312 children vaccinated at the Civil Hospital, 309 were seen and proved to be successful, and 3 only were not seen, and are recorded as doubtful, so that I think I am justified in believing that fully 99 per cent. of the operations performed have been successful. After the facts recorded in the last paragraph I need hardly say that the lymph introduced by me last year continues excellent, the vesicle maintaining its normal character.

RUTNAGHERRY.

One Vaccinator under the Civil Surgeon, Assistant Surgeon H. DAY, M. D.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	514	....	....	481	93·5
1863....	713	199	....	572	80·2

Some difficulty is still felt in obtaining permission to vaccinate children in this district. Representations were made during the past year to the Collector who caused inquiries to be made into the subject, and a proclamation in the Murathee language was published, but without much effect.

HONORE.

On Vaccinator under the Civil Surgeon, Assistant Surgeon A. E. M. Ross.

Years.	Total Vaccinated	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	773	....	....	654	84·6
1863....	474	....	299	371	78·2

I regret to have to notice a serious falling off in the past as compared with the preceding year in the number of operations performed by the station vaccinator of 299, the total number vaccinated in 1863 being 474, in 1862, 773. In the latter year 119 cases were unsuccessful, in the former 103. Thus not only has the number of operations performed become less, but the proportion of unsuccessful to successful cases has become much greater. The prejudice of the Hindoo population against the prophylactic is still, I regret to say, as strong as ever, and to this cause must the vaccinator's want of success be partly ascribed. The prevailing fever forms a prominent excuse on the part of those of the people who are unwilling to receive the prophylactic. If an interest were shown by the Magisterial Department in the spread of the prophylactic, it would, I am sure, be much more favourably received, but from the reports I receive from the vaccinator I am led to believe that the subordinate officers of that department are still among the most vigorous opponents of its introduction.

VINGORLA.

Senior Apothecary S. Hanson.

Years.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	159	....	....	145	91·2
1863....	162	3	....	145	89·5

The total number vaccinated during the year ending 31st December 1863 was 162, being an increase of 3 on that of the previous year. Of these 84 were male, and 78 female children; 33 were under one year, and 129 above that age. The successful vaccinations have been 145 or 89·5 per cent. on the total number vaccinated. The lymph and vesicles were good. No cases of small-pox came under observation during the year.

ADEN.

One Vaccinator under the Civil Surgeon, Surgeon J. F. STEINHAUSER, M. D.

YEARS.	Total Vaccinated	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	1,004	....	....	587	58·4
1863....	622	....	382	426	68·5

The very large decrease in the numbers vaccinated during the year 1863 sufficiently demonstrated how unsatisfactory vaccination at this station has been during the year. At the close of 1862 the lymph in use was good, producing vesicles with the true characteristic appearances, but was lost by culpable neglect on the part of the assistant vaccinator. I succeeded in re-establishing on this occasion perfect lymph from capillary tubes sent from England, but in the month of January the assistant vaccinator absconded. Vaccination from this period was carried on with effective virus by the Second Hospital Assistant of the Civil Hospital with a view to preserve the lymph by direct vaccination from arm to arm until a new candidate for the vacant post could be found. Of the many applicants a young Arab with the rare accomplishment among this people of being able to read and write, was selected and duly placed under instruction. Healthy children were now selected for operation with the lymph sent from England in the month of July and August, but by six capillary tubes employed not one typical vesicle was produced, proving that lymph even thus preserved will deteriorate in this hot and damp climate. There can never be a dearth of subjects for vaccination at Aden, though they may be difficult to find, as the population is very fluctuating, nor are the Arabs, Somalis, and Jews—constituting the bulk of the inhabitants,—actively opposed to the operation. They must however be accused of apathy or want of confidence in the protecting power of the prophylactic. The Jews, who at one time were averse to the operation, now furnish a fair proportion of cases.

BUSHIRE.

Assistant Surgeon W. H. COLVILL.

YEARS.	Total Vaccinated.	Compared with the preceding Year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	324	....	....	324	100·0
1863....	231	....	93	231	100·0

During the past year 231 persons were vaccinated with success, thus showing a decrease as compared with 1862 of 93. The vaccine lymph failed last year on the 9th of May on account of the heat, a fresh supply of matter was got from Bombay, and vaccination was recommenced on the 26th of November.

AHMEDABAD.

One Vaccinator under the Civil Surgeon, Surgeon D. WYLLIE, M. D.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	2,778	....	....	2,666	95·9
1863....	2,686	....	92	2,588	96·3

In respect of age, males as usual predominated, the number being 1,508 to 1,178 females. But this difference was less marked than it was during the previous year, when the former equalled 57·6 per cent. of the whole. As to age, 1,862 were under one year, against 824 over that age. Previous to 1859 the number falling under the latter head had been uniformly the larger. The results were particularly satisfactory, and compare favourably with previous experience, the failures only amounting to 51, and the doubtful cases to 47.

The lymph continued of good quality up to September when there were signs, in some few cases, of deterioration which led to a trial of lymph from Europe. A larger and better formed vesicle was the result, and thus the new lymph was gradually introduced till it finally supplanted the old towards the close of the year.

A few isolated cases of small-pox occurred in camp during January and February, but the first appearance of the disease in the city was delayed till March. It lingered on till the middle of June, and vanished with the first heavy fall of rain. The type of attack was not only milder, but the seizures were also fewer than I have hitherto known; while the entire number of deaths did not exceed twelve.

No instance of inoculation has come to notice for many years, and no doubt the practice has altogether ceased in this Collectorate. Vaccination is in no way opposed. Ordinarily speaking it must simply be brought to the doors of the people, and be arranged to suit their convenience to succeed. There are exceptions, of course, for some few voluntarily seek it, mostly the humbler class of settlers from a distance, and particularly those from Rajpootana; while others stand quietly aloof, notably the Borah and other exclusive sects of the Mahomedan population.

KAIRA.

One Vaccinator under the Civil Surgeon, Assistant Surgeon C. JOHNSON.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	....	....	....	....	....
1863....	433	433	....	358	82·7

The total number vaccinated during the year is 433. Of these males 318, females 115; total number of successful cases 358. The lymph used was generally of fair quality, and the vesicles of average size and well formed.

There has been no difficulty in getting children for vaccination. The vaccinator merely having to give notice of his arrival, and the people willingly brought their children to be vaccinated. The better class of Mussulmans and Hindoos send for the vaccinator to their houses, and are glad to avail themselves of his services, and seem thankful for them. His tour has extended as far as three coss about the suburbs of Kaira, and in and about the town. He now confines his labours more to the town of Kaira itself, the assistant vaccinator of the district having taken objection to his working in the districts.

SURAT.

One Vaccinator under the Civil Surgeon, Assistant Surgeon W. A. SHEPHERD.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	1,740	....	....	1,518	87·2
1863....	1,955	215	....	1,749	89·4

During the year ending on the 31st of December 1863, 1,955 children of Surat were vaccinated, exhibiting an increase of 215 over the year 1862, and nearly 100 over the records of any previous year. Of the 1,955 a large proportion, viz. 1,672 were Hindoos; 1,108 were children under one year; and those above one year, viz. 847, although not thus shown in the table, were nearly all children under 2 years of age.

Vaccination is now performed at two stations at different ends of the city, namely, the Civil Hospital, and the Station Dispensary. It is performed at each of these places, twice a week, and is immediately under my personal observation, direction, and control.

BROACH.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. GLEN.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated	Percentage of Success.
		Increase.	Decrease.		
1862....	931	....	....	735	78·9
1863....	1,203	272	....	1,040	78·9

The total number of persons vaccinated during the past year has amounted to 1,203, being an increase of 272 over the year 1862. Of this number 723 were males, the remainder females. Of children vaccinated under one year, the number amounts to 696, above that age to 507. Of the various castes, Hindoos, as has ever been the case in Broach and its vicinity, greatly preponderate; they never, or rarely ever, raise objections concerning religious or other caste prejudices, such as are frequently met with in the Mussulman and Parsee communities. The increase this year may be attributed to the more steady working of the vaccination establishment, and to a better acquaintance with the people, which the present incumbent has gained.

RAJCOTE.

One Vaccinator under the Civil Surgeon, Assistant Surgeon E. R. BUTLER.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	821	....	....	708	86·2
1863....	1,341	520	....	1,192	88·9

No Report received.

KUTCH.

Mr. SUDDASHEW HEMRAJ, G. G. M. C.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	79	....	....	44	55·6
1863....	15	....	64	....	....

No Report received.

KURRACHEE.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. BEAN.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	1,130	....	....	1,061	93·8
1863....	3,945	2,815	....	3,945	100·0

The returns of the year just terminated exhibit a large increase in the number of vaccinations. This is mainly due to the zeal and attention of the station vaccinator, whose conduct in the discharge of his duties has always merited the highest approval. In the beginning of November last his sphere of action was considerably enlarged by the extension of Municipal limits, consequent on the taking over of the large bazaars of the camp, from the Military authorities, and the doing away of the appointment of camp vaccinator.

It will be seen by the returns, that, comparatively, only a small number of Hindoos has been vaccinated, and it is to be regretted that much opposition continues to be experienced from this section of the population, in our endeavours to propagate vaccination, notwithstanding the aid and assistance we have always received in this matter from the magisterial authorities. The migratory population, such as Bruhooes and Mekranees, appear to have the highest opinion of its efficacy, and have throughout the year attended voluntarily at the Civil Hospital to be vaccinated, latterly in large numbers, since small-pox has been prevalent. This disease made its appearance about two months ago, and has been slightly epidemic ever since.

HYDRABAD.

One Vaccinator under the Civil Surgeon, Asst. Surgeon A. N. E. RIDDELL.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Precentage of Success.
		Increase.	Decresae.		
1862....	1,611	....	....	1,269	78·7
1863....	1,115	....	496	872	78·2

During this year 1,115 cases have been vaccinated, showing a decrease of 496 on the previous year. Of males 582, and females 533, were vaccinated. Of these 155 cases were considered unsuccessful and 88 doubtful.

I took charge of the Civil Hospital in the month of April, and found that the vaccinator was in the habit of vaccinating in the city, and only brought children to me occasionally to show the quality of lymph and vesicles: I told him it was necessary I should see, if not all the cases vaccinated, yet a large proportion of them, and as he failed in this, I desired that vaccination should take place at the Civil Hospital. This was done daily in the month of July, and the returns at once fell nearly one-half. Finding daily vaccination unsatisfactory, I finally succeeded in establishing it twice a week, viz. On Mondays and Thursdays, at the Civil Hospital, under my personal inspection. I have no doubt that the decrease in the yearly total is due to my personal superintendence rendering it almost impossible for a false return to be made.

SHIKARPOOR.

One Vaccinator under the Civil Surgeon, Assistant Surgeon J. F. FFOLLIOTT.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	1,448	....	....	1,447	99·9
1863....	1,618	170	....	1,456	89·9

Vaccination has been steadily carried on by the assistant vaccinator under my superintendence during the past nine months, the total number vaccinated during the year shows a slight increase as contrasted with the previous year, and the quality of the lymph and character

of the vesicles continue satisfactory. No opposition is offered to the practice of vaccination, which is conducted in my presence from arm to arm, and shows a high percentage of successful results. During the spring months small-pox was prevalent in the town of Shikarpoor, but not in an epidemic form, only two cases came under treatment, both of whom recovered, and no death from the disease has been reported by the fouzdar. Lymph continues to be supplied to the Civil Surgeon at Jacobabad, and the Sub-Assistant Surgeon at Sukkur, when required. From the accompanying table it will be seen that the total number vaccinated has amounted to 1,618, the operation has been successful in 1,456 cases; unsuccessful in 155, and doubtful in 7. Of the unsuccessful cases only one occurred in a child under 10 years of age, and the remaining 154 in adults. The vaccinator is correct and industrious.

KOTREE.

Assistant Surgeon R. M. CONNELL.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
		Increase.	Decrease.		
1862....	28	....	....	28	100·0
1863....	112	48	....	108	96·4

There is no vaccinator employed under the Civil Surgeon. The number 28 vaccinated in 1862 were vaccinated in the month of December of same year, consequently it cannot be considered a yearly return. 112 were vaccinated at the Civil Hospital, Kotree, during the year 1863, viz. 10 Christains, 18 Hindoos, 84 Mussulmans, of whom 19 were under one year old, 39 above one year. In the absence of a native vaccinator, great difficulties are experienced in carrying on vaccination.

On receipt of the last annual vaccination report by the Principal Inspector-General, I brought to the notice of the Municipality the suggestion contained in paragraph 9 of the Government Resolution with reference to paragraph 80 of the Principal Inspector-General's Report, and I am happy to say, it was decided that a native vaccinator for the town and talooka of Kotree be entertained on a salary of Rupees (15) fifteen a month, to be paid by the Municipality.

APPENDIX.

TABLE

VACCINATION UNDER SUPERIN-

Table showing the Number and Names of the Circles, and their Superintendents; the those of last Year; the Total Number arranged according to Sex, Caste, Age, and Operations performed by each

Number.	Circles.	Names of the Medical Officers Superintendents of Vaccination.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last year.		
					1862.	Increase.	Decrease.
1	Presidency	Sub-Assistant Surgeon Annuta Chundroba.	3	7,016	6,081	935	..
2	Northern	Assistant Surgeon R. Dick, M. D.....	32	49,346	38,160	11,186	..
3	Central	„ T. B. Beatty, M. D	31	48,562	39,701	8,861	..
4	Southern.....	„ F. H. Plumptre	27	28,680	30,405	..	1,725
5	Sind	„ J. Pinkerton, M. D.....	15	39,443	42,282	..	2,839
6	Kattiawar	„ E. R. Butler.....	8	5,415	5,085	330	..
7	Rewa Kanta	„ A. W. G. Adey.....	5	3,008	1,923	1,079	..
		Total.....	121	181,464	163,637	17,827	..

No. I.

TENDENTS IN BRITISH TERRITORY.

Number of Vaccinators employed; the Total Vaccinations performed and compared with Result; the Ratio of Successful to Total Vaccinated; and the Average Number of Vaccinator, for the Year 1863.

Total Number Vaccinated, arranged according to—													
Sex.		Caste.					Age.		Result.			Ratio per cent. of Successful to Number Vaccinated.	Average Number of Persons Vaccinated by each Vaccinator.
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under One Year.	Above One Year.	Successful.	Unsuccessful.	Doubtful.		
4,062	2,954	4,208	1,017	977	663	151	2,714	4,302	5,494	658	864	78·3	2,339
27,176	22,170	42,735	3,944	26	101	2,540	26,142	23,204	43,629	3,466	2,251	88·4	1,542
25,165	23,397	44,052	2,251	213	2	2,044	6,152	42,410	45,008	1,444	2,110	92·7	1,566
15,437	13,243	26,709	1,463	98	..	410	4,780	23,900	26,992	998	690	94·1	1,062
22,219	17,224	4,442	33,061	..	..	1,940	14,079	25,364	37,791	557	1,095	95·6	2,629
2,841	2,574	4,843	488	..	..	84	2,779	2,636	4,951	243	221	91 ·4	677
1,584	1,418	2,656	328	..	2	16	1,401	1,601	2,714	235	53	90·4	600
98,484	82,980	129,645	42,552	1,314	768	7,185	58,047	123,417	166,579	7,601	7,284	91·8	1,499

TABLE

VACCINATION UNDER SUPERINTENDENTS

Table of Vaccination through the Agency of Native Chiefs, arranged according to

for the

Number.	Circles and Stations.	Medical Officers.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last year.		
					1862.	Increase.	Decrease.
1	NORTHERN	Assistant Surgeon R. Dick, M. D.....	10	16,317	13,746	2,571	..
2	CENTRAL	Sub-Assistant Surgeon A. Summers	1	305	148	157	..
3	SOUTHERN	Assistant Surgeon F. H. Plumptre.....	19	15,319	16,734	..	1,415
4	KATTIAWAR ..	,, E. R. Butler	20	15,704	16,933	..	1,229
5	REWA KANTA ..	,, A. W. G. Adey	7	4,089	4,671	..	582
6	BHOOJ	Mr. Sadashew Hemraj, G. G. M. C.....	4	15	79	..	64
		Total..	61	51,749	52,311	..	562

No. II.

AND OTHERS IN NATIVE TERRITORY.

the Circles of Vaccination and Stations, and showing Details as in Table No. I., Year 1863.

Total Number Vaccinated arranged according to—												Ratio per cent of Successful to Number Vaccinated.	Average Number of Persons Vaccinated by each Vaccinator.
Sex.		Caste.					Age.		Result.				
Males.	Females.	Hindoos.	Musulmans.	Christians.	Parsees.	Other Castes.	Under One Year.	Above One Year.	Successful.	Unsuccessful.	Doubtful.		
8,531	7,786	14,139	1,078	..	..	1,100	7,631	8,686	14,156	1,416	745	86·7	1,631
158	147	305	..	..	..	..	257	48	177	57	71	58·0	305
7,851	7,468	14,154	496	106	..	563	3,079	12,249	14,288	609	422	93·3	806
8,504	7,200	13,303	2,282	..	..	119	7,047	8,657	14,099	998	607	89·7	785
2,050	2,039	3,702	138	..	..	249	1,703	2,386	3,614	238	237	88·4	584
11	4	10	5	..	..	..	..	15	..	12	3	..	4
27,105	24,644	45,613	3,999	106	..	2,031	19,708	32,041	46,334	3,330	2,085	89·5	848

TABLE

VACCINATION UNDER CIVIL

Table of Vaccination under Civil Surgeons and others, arranged according

Number.	Division of Deputy Inspector-General of Hospitals.	Civil Stations.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last year.			Sex.	
					1862.	Increase.	Decrease.	Males.	Females.
1	PRESIDENCY	Tanna	..	71	38	33	..	35	36
		Alibaugh	..	89	89	..	..	50	39
		Bandora	..	65	79	..	14	50	15
		Coorla	..	9	8	1	..	6	3
		Total	..	234	214	20	..	141	93
2	POONA	Poona	1	1,918	1,832	86	..	1,121	797
		Ahmednuggur	1	1,260	1,240	20	..	818	442
		Satara	1	3,832	1,435	2,397	..	2,115	1,717
		Sholapoor	1	1,438	1,392	46	..	754	684
		Dhoolia	1	732	857	..	125	399	333
		Nassick	1	570	854	..	284	314	256
		Total	6	9,750	7,610	2,140	..	5,521	4,229
3	NORTHERN	Ahmedabad	1	2,686	2,778	..	92	1,508	1,178
		Kaira	1	433	..	433	..	318	115
		Surat	1	1,955	1,740	215	..	1,057	898
		Broach	1	1,203	931	272	..	723	480
		Rajcote	1	1,341	821	520	..	731	610
		Total	5	7,618	6,270	1,348	..	4,337	3,281
4	SOUTHERN	Belgaum	1	547	556	..	9	318	229
		Dharwar	1	1,080	1,478	..	398	580	500
		Kolapoor	1	3,022	2,879	143	..	1,566	1,456
		Rutnagherry	1	713	514	199	..	416	297
		Honore	1	474	773	..	299	249	225
		Hooblee	1	1,088	1,186	..	98	567	521
		Vingorla	..	162	159	3	..	84	78
		Total	6	7,086	7,545	..	459	3,780	3,306
5	SIND	Kurrachee	1	3,945	1,130	2,815	..	2,191	1,754
		Hydrabad	1	1,115	1,611	..	496	582	533
		Shikarpoor	1	1,618	1,448	170	..	947	671
		Dispensaries	..	2,563	2,461	102	..	1,466	1,097
		Total	3	9,241	6,650	2,591	..	5,186	4,055
6	ADEN	Aden	1	622	1,004	..	382	485	137
7	PERSIAN GULF	Bushire	..	231	324	..	93	120	111
		Grand Total	21	34,782	29,617	5,165	..	19,570	15,212

No. III.

SURGEONS AND OTHERS.

to Divisions, and showing the Details as in Table No. I. for the Year 1863.

Total Number Vaccinated, arranged according to—											
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of Persons Vaccinated by each Vaccinator.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under One Year.	Above One Year.	Successful.	Unsuccessful.	Doubtful.		
28	9	30	4	..	41	30	61	10	..	85·9	....
53	13	1	..	22	23	66	72	17	..	80·9	....
8	10	34	10	3	18	47	58	3	4	89·2	....
3	2	4	..	..	..	9	3	2	4	33·3	....
92	34	69	14	25	82	152	194	32	8	82·9	....
1,639	248	25	6	..	844	1,074	1,587	140	191	82·7	1,918
1,022	198	38	2	..	324	936	1,017	162	81	80·7	1,260
3,468	117	20	..	227	1,096	2,736	2,924	313	595	76·3	3,832
787	410	1	..	240	420	1,018	819	336	283	56·9	1,438
573	85	2	..	72	643	89	655	39	38	89·4	732
454	41	10	..	65	391	179	426	10	134	74·7	570
7,943	1,099	96	8	604	3,718	6,032	7,428	1,000	1,322	76·2	1,625
2,207	454	9	16	..	1,862	824	2,588	51	47	96·3	2,686
382	51	..	..	..	362	71	358	17	58	82·7	433
1,672	237	5	41	..	1,108	847	1,749	94	112	89·4	1,955
941	233	3	25	1	696	507	1,040	70	93	86·4	1,203
1,156	103	3	1	18	659	682	1,192	108	41	88·9	1,341
6,358	1,138	20	83	19	4,687	2,931	6,927	340	351	90·9	1,523
443	93	11	..	..	333	214	536	9	2	98·0	547
902	172	6	..	..	227	853	971	99	10	89·9	1,080
2,999	23	..	..	..	717	2,305	2,945	6	71	97·4	3,022
587	125	1	..	..	124	589	572	49	92	89·2	713
381	7	62	..	24	67	407	371	88	15	78·2	474
206	868	8	..	6	180	908	974	89	25	89·5	1,088
144	10	8	..	..	33	129	145	10	7	89·5	..
5,662	1,298	96	..	30	1,681	5,405	6,514	350	222	91·9	1,154
502	2,993	120	33	297	1,892	2,053	3,945	..	..	100·0	3,945
536	535	44	..	..	764	351	872	155	88	78·2	1,115
769	836	10	..	3	1,366	252	1,456	155	7	89·9	1,618
1,250	1,262	27	3	21	796	1,767	2,232	201	130	87·1	..
3,057	5,626	201	36	321	4,818	4,423	8,505	511	225	92·0	2,226
57	77	8	3	477	74	548	426	109	87	68·5	622
..	213	3	..	15	133	98	231	..	..	100·0	..
23,169	9,485	493	144	1,491	15,193	19,589	30,225	2,342	2,215	86·9	1,504

TABLE

General Abstract of Vaccination

Designation of Tables.	Total Number Vaccinated.	Compared with last year.			Sex.	
		1862.	Increase.	Decrease.	Males.	Females.
No 1, Vaccination under Superintendents in British Territory	181,464	163,637	17,827	....	98,484	82,980
No. 2, Ditto ditto and others in Native ditto ..	51,749	52,311	....	562	27,105	24,644
No. 3, Ditto under Civil Surgeons, &c.	34,782	29,617	5,165	....	19,570	15,212
Total....	267,995	245,565	22,430	....	145,159	122,836

No. IV.

FOR THE YEAR 1863.

Total Number Vaccinated, arranged according to—										
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under One year.	Above One year.	Successful.	Unsuccessful.	Doubtful.	
129,645	42,552	1,374	768	7,185	53,047	129,417	166,579	7,601	7,284	91·8
45,613	3,999	106	..	2,031	19,708	32,041	46,234	3,330	2,085	89·5
23,169	9,485	493	144	1,491	15,193	19,589	30,225	2,342	2,215	86·9
198,427	56,036	1,913	912	10,707	92,948	175,047	243,138	13,273	11,584	90·7

TABLE No. V.

TABLE OF AGES.

Vaccination in 1863, *arranged according to Ages, whether performed under or above One Year of Age.*

ESTABLISHMENTS, &c.	AGE.		DIFFERENCE.		Total Vaccinated.
	Under One Year.	Above One Year.	Under.	Above.	
I.—Superintendents in British Territory	58,047	123,417	....	65,370	181,464
II. Ditto and others in Native do..	19,708	32041	....	12,333	51,749
III. Civil Surgeons and others	15,193	19,589	....	4,396	34,782
Total..	92,948	175,047	....	82,099	267,995
I.—*Superintendents in British Territory.*					
Presidency Circle.....	2,714	4,302	....	1,588	7,016
Northern do.	26,142	23,204	2,938	....	49,346
Central do.	6,152	42,410	....	36,258	48,562
Southern do.	4,780	23,900	....	19,120	28,680
Sind do.	14,079	25,364	....	11,285	39443
Kattiawar do.	2,779	2,636	143	....	5,415
Rewa Kanta do.	1,401	1,601	....	200	3,002
II.—*Superintendents and others in Native Territory.*					
Northern Circle	7,631	8,686	....	1,055	16,317
Central do.	257	48	209	....	305
Southern do.	3,070	12.249	....	9,179	15,319
Kattiawar do.	7,047	8,657	....	1,610	15,704
Rewa Kanta do.	1,703	2,386	....	683	4,089
Bhooj	....	15	....	15	15
III.—*Civil Surgeons and others.*					
Tanna	41	30	11	....	71
Alibaugh	23	66	....	43	89
Bandora	18	47	....	29	65
Coorla	....	9	....	9	9
Poona	844	1,074	....	230	1,918
Ahmednuggur	324	936	....	612	1,260
Sattara	1,096	2,736	....	1,640	3,832
Sholapoor.....	420	1,018	....	598	1,438
Dhoolia	643	89	554	....	732
Nassick.....	391	179	212	....	570
Ahmedabad	1,862	824	1,038	....	2,686
Kaira	362	71	291	....	433
Surat.....	1,108	847	261	....	1,955
Broach	696	507	189	....	1,203
Rajcote	659	682	....	23	1,341
Belgaum	333	214	119	....	547
Dharwar	227	853	....	626	1,080
Kolapoor	717	2,305	....	1,588	3,022
Rutnagherry	124	589	....	465	713
Honore.....	67	407	....	340	474
Hooblee.....	180	908	....	728	1,088
Vingorla	33	129	....	96	162
Kurrachee	1,892	2,053	....	161	3,945
Hydrabad	764	351	413	....	1,115
Shikarpoor	1,366	252	1,114	....	1,618
Sind Dispensaries	796	1,767	....	971	2,563
Aden.....	74	548	....	474	622
Bushire	133	98	35	....	231

TABLE No. VI.

EMPLOYMENT RETURN OF SUPERINTENDENTS OF VACCINATION FOR THE YEAR 1863.

NORTHERN CIRCLE.

Superintendent.—Assistant Surgeon R. DICK, M.D.

MONTHS.	Number of Stations Visited.	Distance Travelled.	Number of Travelling Days.	Number of Childern Inspected.	SUMMARY OF REMARKS.
January	19	157 Miles.	14	204	14 Villages visited and inspected.
February	14	149 do.	14	376	12 Do. do.
March	15	153 do.	12	432	14 Do. do.
April.....	16	140 do.	19	580	16 Do. do.
May	15	126 do.	14	385	13 Do. do.
June.....	5	52 do.	8	400	9 Do. do.
July	7	235 do.	7	320	7 Do. do.
August.....	2	14 do.	3	57	2 Do. do.
September ..	2	23½ do.	3	30	2 Do. do.
October	5	54 do.	6	83	5 Do. do.
November ..	13	150 do.	15	281	8 Do. do.
December ..	16	128½ do.	16	699	15 Do. do.
Total....	129	1,382 Miles.	131	3,847	

CENTRAL CIRCLE.

Superintendent.—Assistant Surgeon T. B. BEATTY, M. D.

MONTHS.	Number of Stations Visited.	Distance Travelled.	Number of Travelling Days.	Number of Childern Inspected.	SUMMARY OF REMARKS.
January	9	82 Miles.	17	733	20 Villages visited and inspected.
February....	10	80 do.	15	666	19 Do. do.
March	9	105 do.	13	926	21 Do. do.
April	12	96 do.	18	1,252	22 Do. do.
May	16	137 do.	15	891	12 Do. do.
June.....	9	64 do.	10	359	10 Do. do.
July	..	....	..	..	
August.....	..	....	..	..	
September ..	..	....	..	..	
October	..	....	..	..	
November ..	..	....	..	..	
December ..	9	152 do.	10	1,579	28 Villages visited and inspected.
Total....	74	716 Miles.	98	6,406	

SOUTHERN CIRCLE.

Superintendent.—Assistant Surgeon F. H. PLUMPTRE.

MONTHS.	Number of Stations Visited.	Distance Travelled.	Number of Travelling Days.	Number of Children Inspected.	SUMMARY OF REMARKS.
January	14	153 Miles.	8	1,136	6 Villages inspected.
February	7	126 do.	10	640	7 Do. do.
March	10	220 do.	13	595	10 Do. do. Dr. Asher delivered over charge to Dr. Cook, Civil Surgeon, Sattara, 30th March.
April.....	4	85 do.	8	392	5 Villages visited and inspected. Dr. Plumptre assumed charge on the 9th April.
May	5	120 do.	8	48	1 Village inspected.
June	..	....	..	..	
July	..	....	..	..	
August.....	..	....	..	..	
September ..	..	....	..	..	
October.....	6	64 do.	7	401	10 Villages visited and inspected.
November ..	4	23 do.	12	223	10 Do. do. do.
December ..	8	116 do.	11	555	13 Do. do. do.
Total..	58	907 Miles.	77	3,990	

SIND DIVISION.

Superintendent.—Assistant Surgeon J. PINKERTON, M.D.

MONTHS.	Number of Stations Visited.	Distance Travelled.	Number of Travelling Days.	Number of Children Inspected.	SUMMARY OF REMARKS.
January	1	20 Miles	1	22	1 Village visited. (Sick.)
February	..	....	..	30	1 Do. do.
March	11	136 do.	10	1,204	Several villages visited and inspected. Received charge from Dr. Martin on the 6th March.
April.....	17	211 do.	7	1,007	45 Villages visited and inspected.
May	18	146 do.	19	623	45 Do. do.
June	6	43 do.	8	294	22 Do. do.
July	5	154 do.	5	40	1 Do. Stationed at Tatta on account of rain.
August.....	..	....	..	139	1 Do. Stationary at Tatta.
September ..	6	165 do.	8	151	8 Do. and inspected.
October	13	115 do.	15	1,001	Several Villages visited & inspected.
November ..	18	396 do.	19	1,474	Do. do. do.
December....	16	145 do.	15	1,216	Do. do. do.
Total....	111	1,531 Miles.	107	7,201	

KATTIAWAR CIRCLE.

Superintendent.—Assistant Surgeon E. R. BUTLER.

MONTHS.	Number of Stations Visited.	Distance Travelled.	Number of Travelling Days.	Number of Children Inspected.	SUMMARY OF REMARKS.
January	5	62 Miles.	5	10	1 Village visited. On duty at Kaira.
February	..	..	..	..	
March	18	198 do.	20	374	12 Villages visited and inspected.
April.....	16	189 do.	19	241	8 Do. do.
May	13	120 do.	15	89	2 Do. do.
June	10	99 do.	11	227	9 Do. do.
July	..	..	..	..	
August.....	..	..	..	..	
September ..	..	..	..	..	
October	..	..	..	..	
November ..	..	..	..	..	
December ..	15	200 do.	22	327	23 Villages visited and inspected.
Total....	77	928 Miles.	92	1,268	

REWA KANTA.

Superintendent.—Assistant Surgeon A. W. G. ADEY.

MONTHS.	Number of Stations Visited.	Distance Travelled.	Number of Travelling Days.	Number of Children Inspected.	SUMMARY OF REMARKS.
January	..	....	..	..	
February	..	....	..	..	
March	..	....	..	..	
April.....	..	....	..	..	
May	..	....	..	..	
June.....	..	....	..	..	
July.....	..	....	..	..	
August.....	..	....	..	..	
September ..	..	....	..	..	
October.....	23	222½ Miles	24	434	Several villages visited and inspected.
November ..	11	206 do.	16	687	Ditto ditto.
December....	..	....	..	..	
Total..	34	428½ Miles	40	1,121	

GENERAL DEPARTMENT.

Government Resolution, No. 1100, 25th June 1864.

The Governor in Council is gratified to find that the returns for the year under report show a "decided improvement," and that the number of vaccinations has more than recovered the falling off which was noticed in 1862; and His Excellency in Council trusts that the sanction given to the employment of Peons with the view of assisting the Vaccinators in collecting the children of the villages visited for vaccination and inspection will have the results anticipated by the Principal Inspector-General of the Medical Department in paragraph 7 of his Report.

2. The Governor in Council has also learnt with satisfaction that the desire which Government expressed in paragraph 5 of their Resolution No. 1131, dated 27th July 1863, that Officers in charge of Districts should give the aid of their influence in support of the Vaccination Department, has been so cordially attended to by the Native Officials of the Northern Circle. His Excellency in Council trusts that every Native Official will bear in mind the wishes of Government in this respect.

3. The Principal Inspector-General, whilst noticing the assistance which Dr. Dick acknowledges to have thus received from the Civil authorities, ascribes the large increase in the number of vaccinations in the Northern Circle as "mainly due to his own unwearied exertions." The distance which Dr. Dick travelled, and the large number of Vaccinators whose work he examined, during the season, appear to His Excellency in Council to fully justify the high opinion recorded by Dr. Stovell of his diligence and zeal.

4. The plan adopted by Dr. Beatty for facilitating the work of his Vaccinators is a very judicious one, and, as it appears to have worked satisfactorily, it is deserving of trial in the other Circles.

5. The Governor in Council is glad to learn that the suggestion thrown out in the Principal Inspector-General's Report of the previous year, and approved of by Government, to enlist the aid of the Municipalities in support of vaccination, has been acted upon in the Collectorate of Sattara.

6. His Excellency in Council has perused with interest the remarks of Dr. Plumptre on this subject, and considers that the acknowledgements of Government are due to Dr. Plumptre for the manner in which he has carried out this proposal, and to Mr. Chapman for his co-operation in the measure.

7. The Governor in Council desires that the satisfaction of Government may also be expressed to the Municipal Commissions who have so readily entered into the suggestion.

8. The satisfaction of Government should likewise be expressed to the Municipalities of Kotree and Hooblee, by which Vaccinators were entertained at their own expense.

9. The acknowledgments of Government are also due to Major Keatinge for the interest he has shown, and the support he has given, to the cause of vaccination in Kattywar, and the Governor in Council desires that he will express the same to those Chiefs within his jurisdiction who have afforded him co-operation in the good work.

10. The Political Agent Southern Muratha Country should intimate to the Chief of Koorundwar and his Karbaree the pleasure with which Government have learnt from the report of Dr. Plumptre the assistance given to him by them personally when he visited the Jagheer. The Governor in Council trusts that the other Chiefs and Jagheerdars of the Southern Muratha Country, as also elsewhere, will not content themselves with merely employing Vaccinators, but that they will give that support to the efforts of the Officers of the Department which the exhibition of their personal interest in the work is so calculated to afford.

11. With regard to paragraphs 21 to 24 and 35 to 38 of the Report, the Governor in Council regrets that the Principal Inspector-General has been unable to do anything towards carrying out the suggestions contained in paragraph 4 of the Resolution on last year's Report for the publication in the vernacular of each District of a statement of facts proving the great benefits conferred by vaccination, for distribution among the people. Dr. Plumptre seems to have drawn up some such statement, but it is to be regretted that, owing to delay in the Oriental Translator's Office, he did not receive it in time for issue during the season under report.

12. His Excellency in Council considers that the translation into the vernaculars, and the publication annually in the form of a small tract, of the Report of the Principal Inspector-General, and of the Resolution of Government thereon, for distribution, might do much good, and will have the present Report translated and published. The Principal Inspector-General in his

next year's Report should be requested to state whether he considers the plan should be continued.

13. His Excellency in Council also considers that it might draw the attention of the people generally to the subject of vaccination, and have a useful effect, were the Village Officers throughout all the Districts required to submit returns of the number of cases of small-pox which have occurred during the year, the number of these in which the patients had been vaccinated, and the number unprotected by the prophylactic, the number of the former who were vaccinated during infancy or otherwise, and, lastly, the mortality among each class. The publication and distribution of this information annually would doubtless do much good.

14. It is gratifying to find the proportion of infantile vaccinations continues to increase. As observed in the Resolution on last year's Report, there can be no surer test than this of the value which vaccination is acquiring in the eyes of the people, and it is of the greater importance as it is stated (paragraph 20 of the Report) that the accumulated experience of Europe shows that vaccination during infancy gives a greater security from small-pox than when resorted to at any later age. This is a fact which cannot be too prominently made known or explained.

15. The Governor in Council has learnt with satisfaction that there have been no cases of inoculation during the year under report in Sind, and that the steps taken by the Commissioner in Sind appear calculated to put an end completely to the practice in that Province.

16. The attention of the Magistrate of Surat should be drawn to paragraphs 25 and 26 of the Report.

17. The character of the vaccine lymph is a subject of great importance, and it is satisfactory that the quality of it "has been well reported on by nearly all the Medical Officers." Nothing is more calculated to create greater distrust of the efficacy of vaccination as a safeguard than the occurrence of cases of small-pox in vaccinated subjects, the result, probably, of the employment of deteriorated lymph. It is, therefore, highly gratifying to learn that the increased remuneration authorized to be given to Native parents for allowing their children to be conveyed from village to village for ensuring the transmission of fresh lymph has had beneficial results.

18. The suggestion adverted to in paragraph 34 of the Report is a judicious one, and the Governor in Council is glad to find that Dr. Stovell has taken steps to carry it into practice.

19. In conclusion, the Governor in Council desires to record his appreciation of the services of the several Superintendents whose exertions have been prominently brought to notice by Dr. Stovell. Special mention has already been made of Drs. Beatty, Dick, and Plumptre. Dr. Pinkerton, in Sind, appears to have maintained the high character which the Department bore in that Province under his predecessor. His Excellency in Council has perused with pleasure the testimony borne by Dr. Stovell to the conduct of the Vaccinators generally.

(Signed) H. J. JACOMB,
Officiating Under-Secretary to Government.

BOMBAY: PRINTED AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR THE YEAR 1864.

Bombay:
PRINTED FOR GOVERNMENT
AT THE
EDUCATION SOCIETY'S PRESS, BYCULLA.

1865.

REPORT

ON

VACCINATION THROUGHOUT THE BOMBAY PRESIDENCY AND SIND,

FOR THE YEAR 1864.

No. 555 of 1865.

From the Principal Inspector General, Medical Department,

To the Secretary to Government, General Department.

Sir,—I have the honour to submit to His Excellency the Governor in Council the Annual Report on Vaccination for 1864. It consists—

1*st.*—of a brief statement of the general working of the department during the year;

2*ndly.*—of extracts from the reports by the Superintendents of Vaccination and by Civil Surgeons; and

3*rdly.*—of tabulated figured results.

2. Two changes took place among the Superintendents during the year. Assistant Surgeon Turnbull was nominated to fill the vacancy caused by the transfer of Dr. Beatty to another appointment; and Assistant Surgeon Fleming succeeded Assistant Surgeon Adey, who vacated his post by remaining in Europe beyond the period at which, in accordance with the Regulations, he could retain it.

3. At the close of the year the Superintendents were as follows:—

Northern	Circle—	Assistant	Surgeon	Dick, M.D.
Central	do.	„	„	Turnbull, M.D.
Southern	do.	„	„	Plumptre.
Sind	do.	„	„	Pinkerton, M.D.
Kattiawar	do.	„	„	Butler, M.D.
Rewa Kanta	do.	„	„	Fleming.
Presidency	do.	Sub-Assistant	Surgeon	Anunta Chundroba.

4. In the report for 1863, I alluded to three important measures recently sanctioned by Government for increasing the efficiency of the department, viz:

1*st*.—The admission of native vaccinators to the privilege of pension;

2*ndly*.—The establishment of a separate body of peons to assist in collecting children for vaccination, and for subsequent inspection; and

3*rdly*.—The grant of an increased allowance for remunerating native parents for allowing their children to be conveyed from village to village, for the purpose of ensuring vaccine lymph being transmitted direct from arm to arm.

5. In concluding that report I expressed an opinion that these measures could not fail to prove highly beneficial to the cause of vaccination, that they would be fully appreciated by the Superintendents and their establishments, and that they would be responded to on their parts by increased exertions, leading to far greater results than had ever yet been shown.

6. I am happy to state that these anticipations have been fully realized; for while the total number of vaccinations during 1863 was 267,995, the number for the past year was 332,894,* being a very marked increase of 64,899.

7. This increase was not confined to any limited number of districts, but, with the sole exception of the Rewa Kanta, was diffused throughout every part of the Presidency. It does very great credit to the Superintendents and their establishments. It demonstrates in the clearest manner how zealously and earnestly each and all must have been working during the year.

8. Where all have done so well, it seems almost invidious to point out which circle, in particular, has made the greatest advance. Nevertheless it is desirable to record briefly the relative results; and an examination of the different returns shows the following extent of increase in the five larger circles:—

Central	Circle..... ...	22,000
Northern	do.	21,000
Southern	do.	12,000
Sind	do.	7,000
Kattiawar	do.	5,500

9. There was also a marked increase under the Civil Surgeons at Ahmedabad, Surat, Kaira, Nuggur, Belgaum, and Rutnagherry; under the Sub-Assistant Surgeon at Nassick, and under the municipal vaccinators at Hooblee and

* Not including about 3,000 persons vaccinated at the expense of several Municipal Commissions in the Sattara districts.

Kotree; but there was a considerable falling off under the Civil Surgeons at Sattara, Kolapoor, Kurrachee, and Hydrabad.

10. About 8 per cent. of the operations proved either unsuccessful or doubtful. Thus out of the 332,894 vaccinations, 306,525 were reported as successful. That the returns received by the Superintendents from their native vaccinators, on this and other points, are in the main correct, there is good reason to believe; and certainly the most strenuous efforts are made by the Superintendents to test their accuracy by personal inspection and by other means. Instances of falsification, however, are occasionally met with. It should, therefore, be understood that the figures are to be regarded, not in the light of perfect accuracy, but merely as an approximation to it. Two such instances occurred during the year, viz. one in the Central and one in the Southern Circle. In each case the vaccinator was dismissed the service.

11. As some 200 vaccinators, however, are employed under the Superintendents, and as only these two were detected in making false returns, it seems reasonable to conclude that the practice is by no means common. On this point Dr. Pinkerton states very pointedly that he travelled during the year in every district in Sind, that he examined the work of 14 vaccinators, and inspected upwards of 10,000 children, yet failed to detect a single instance of false registers. He then adds, "if falsification existed I should certainly have detected it."

12. Dr. Butler makes a very similar remark. He states that he travelled over the greater part of Kattiawar, and examined the work of 19 vaccinators, yet "did not find a single false return."

13. With regard to sex—

180,200 were males, and
152,694 were females.

14. The castes were as follows:—

Hindoos	250,764
Mussulmans	64,007
Christians	1,715
Parsees	922
Other castes	15,486

15. Of the total number of operations, 223,343 were performed in persons above one year of age, and 109,551 in those below it.

16. In the last report I made a few remarks on the great importance of vaccination being attended to during infancy, inasmuch as, when properly performed thus early in life, it affords a far greater security from small-pox

than when resorted to at a later age. The result of the accumulated experience of Europe all points in this direction; and as still further confirmatory of the correctness of this view, I may mention that it was recently stated in a medical periodical that, at an interview which a deputation of the Epidemiological Society in London had a few months ago with the President of the Privy Council, it was urged by the members of the deputation that "if every body was thoroughly well vaccinated in early infancy, small-pox might be nearly banished from our death registers".

17. I would, therefore, again urge upon the Superintendents of the Central and Southern Circles,—in which the prejudices of the people against early vaccination are much stronger than elsewhere,—to increase their endeavours to overcome these prejudices, and to redouble their efforts to make parents comprehend its paramount advantages.

18. Why these prejudices should be so much stronger in the Deccan and Southern Mahratta Country than in Gujerat and Sind, it would be difficult to explain; but that such is the fact there is no doubt. The returns from the Deccan, for instance, show that only 11 per cent. of the vaccinations were in children under one year of age, while those from the Superintendent in Gujerat give 48 per cent.

19. The returns from some of the Civil Surgeons in that province show a still higher per-centage. Thus, Broach gives 61, Kaira 75, and Ahmedabad 76 per cent. So far, the result is encouraging; and Dr. Wyllie, who, as Civil Surgeon at Ahmedabad, has for a long period taken great interest in the subject, mentions that since 1858 every year's experience has shown a large and growing increase in the proportion of vaccinations under one year of age,—a fact, he adds, "of some significancy, not only as confirmatory of the advance of popular appreciation, but as illustrative of the success that has attended the working of the department."

20. At one or two places in Sind the per-centage was equally high, and under the Civil Surgeon at Shikarpoor it even rose to 94, for while only 69 operations were performed in persons above one year of age, no less than 1,259 were in children below it. Dr. Ffolliott, the Civil Surgeon, accounts for this by stating that the whole population of Shikarpoor, under ten years of age, is protected by vaccination, and that the operations were almost limited to children born within the year. The 69 persons above one year of age were chiefly Patans, who came of their own accord from the Kaffila Serai to be vaccinated. Shikarpoor is probably better protected against small-pox than any other town throughout the Presidency, and as a proof of the great advantage of this unceasing attention to vaccination during early life it may be mentioned that not a single case of small-pox has occurred there for a long period.

21. Proofs, however, of the immunity afforded by vaccination, properly performed, may be met with everywhere. One of the most signal of all is perhaps to be found in the fact,—mentioned a few months ago in a medical periodical,—that during the last 28 years not a single nurse or servant in the small-pox hospital in London ever caught the disease, though of course exposed to its influence in its most virulent forms.

22. At the commencement of the year small-pox prevailed to a considerable extent at Kurrachee as well as in two towns in Kattiawar, and, somewhat later in the season, in Bombay itself and in parts of Canara; but it does not appear to have prevailed as an epidemic, or in a severe, form elsewhere. In many places throughout the Presidency, however, it was occasionally met with in a mild form. Thus during the earlier months of the year it appeared in some of the Kaira districts, and Dr. Dick says it would no doubt have been very prevalent, and have caused a large mortality, if most of the villages had not been carefully gone over by the vaccinators a few months previously. Towards the close of the year it was also met with at Hooblee, and in some of the Belgaum, Kalludghee, and Rutnagherry districts. Wherever it did make its appearance, active measures were immediately taken by the Superintendents to arrest its progress, by vaccinating the unprotected as rapidly as possible.

23. The extent of mortality from small-pox throughout the Presidency cannot be computed, owing to the want of registration, but in Bombay itself the number of deaths from this cause in 1863 was 1,113. They were considerably above the average, the disease having been peculiarly fatal. Viewed in the abstract, this extent of mortality may seem large, but, when contrasted with the state of matters in some parts of Europe during the same year, I do not think we shall find much reason for being dissatisfied, or see much cause for apprehension, particularly on bearing in mind that whilst in most parts of Europe vaccination is compulsory by law, in India it is not.

24. In illustration I would point to London, which has always taken the lead in devising plans for rendering vaccination more effective, and which boasts of having erected a statue in honour of Jenner, its great discoverer. Vaccination has been compulsory in England since 1854, yet small-pox not unfrequently prevails as an epidemic, and in 1863 the deaths from this disease amounted to 2,012 in London alone.

25. The mischievous practice of inoculation, though gradually disappearing, is still occasionally met with. It not only does immense harm by perpetuating and spreading small-pox, but it also causes great mortality. I have been told by a former Superintendent of Vaccination that on one occasion he distinctly and personally traced 35 deaths to this cause.

26. The Superintendent in Sind, in his report for last year, mentions that when he went into the hills lying between Kurrachee and the Khan of Khelat's territory towards the Hubb River, he saw a number of children who had recently been inoculated, and on making enquiries he ascertained that at least two inoculators had been at work in that direction. He further states that the practice resulted in conveying small-pox into Kurrachee, and was the direct cause in producing the epidemic which prevailed in that town at the close of 1863. He adds that as soon as the disease took its terrible hold on Kurrachee, the inoculators went off, but he could not ascertain where they lived.

27. The Superintendent also ascertained that in the Meerpoor Sacra Kardarate, small-pox was kept up during the hot season by an inoculator named Shah Meer, a fukkeer. He saw the man's work in several villages, and states that as soon as the man ceased to inoculate, the disease ceased also. The circumstance was immediately reported to the Deputy Collector at Jerruck, who appears to have taken prompt measures with the view of stopping the practice.

28. Again. The Superintendent of the Central Circle mentions that reports had reached him of the existence of inoculators in the Tanna districts, and that in each case he had requested the magistrate to enquire into the matter, and to take proceedings against them, under the impression that paragraphs 269 and 270 of the Indian Penal Code gave him the requisite power. The magistrate, however, replied that he had no power to do so. As differences of opinion appear to exist on this point, I would venture to suggest whether a reference might not be made to the law officers of Government,—the statements just made in paragraphs 25 and 26, relative to the fatal consequences of inoculation, being borne in mind.

29. The character of the vaccine lymph has been well reported on by nearly every Civil Surgeon and Superintendent throughout the Presidency. In each instance in which there appeared to be the slightest tendency to deterioration, fresh matter was obtained and introduced. There was a good deal of interchange of lymph between different medical officers, and with the best results. Thus the Superintendent of the Southern Circle obtained an excellent supply from Dr. Mills at Kolapoor, and as the vesicles produced therefrom were exceedingly satisfactory, he provided Dr. Bell at Kulludghee, Mr. Hanson at Vingorla, and several other medical officers. The Superintendent remarks that it is a great advantage to himself to have lymph thus maintained at different stations under the immediate superintendence of medical officers, as it enables his vaccinators to obtain a supply from sources on which reliance can be placed, in the event of their own failing or deteriorating.

30. In some places, however, it appears at times to be impossible to keep up a supply of matter so as to be always ready for use; but this need not excite any feeling of surprise, inasmuch as the same complaint is occasionally made in different parts of Europe. In illustration of my remark, I may mention that for a considerable time, last year, lymph could not be maintained at Aden, and vaccination was in consequence suspended. Unhappily too, and for some reason unknown, as recently reported by the Civil Surgeon, the supply annually sent to that station direct from the National Vaccine Institution, failed to be received. At the Presidency itself it is sometimes exceedingly difficult to keep up a sufficient supply, and the difficulty is the greater in consequence of the strong dislike on the part of native parents to have the vesicles of their vaccinated children interfered with.

31. In the report for 1862 I mentioned that, for the purpose of guarding against the inconvenience resulting from this cause, Dr. Peet had entered into an arrangement with the National Vaccine Establishment, London, and the Royal Dispensary, Edinburgh, with the view of ensuring the receipt of periodical supplies. For a time the plan succeeded, but the requirements at home appear to have become so great that both these sources failed, and Dr. Husband, the Superintendent of the latter depôt, reported that the demand in Scotland exceeded his capability of meeting it.

32. Dr. Plumptre, of the Southern Circle, alludes to the subject in his recent report, and urges the importance of obtaining lymph from Europe. He points out that thus "there would be a continuous supply of fresh matter coming into the country, and the fear which has been expressed that the prophylactic in the course of years in a hot climate wears itself out, and ceases to possess its special properties, would be removed."

33. Without entering on the disputed question whether unrenewed lymph would or would not lose its properties in this country in the course of time, there can be no doubt that it is an object of importance to guard against its possible degeneration by obtaining occasional supplies from fresh sources. For this, as well as for other reasons, it seems most desirable that some arrangement should be made, if possible, to carry out more effectually than hitherto the proposal originally made by Dr. Peet, and now renewed by Dr. Plumptre.

34. Dr. Plumptre seems to think that an arrangement might be made for securing a quarterly supply. Bearing in mind, however, that the result of the general experience of India proves that lymph, obtained from Europe, more frequently fails than succeeds, and believing, as I do, that this loss of its properties is attributable to the injurious effects of heat during its passage

from Egypt, and its subsequent transmission to out-stations by post, I am inclined to think that the most effective plan would be to procure only one supply annually, and that during the coldest season of the year. It might be sent from England in November, so as to arrive here in December. By this arrangement we should secure the opportunity of distributing the lymph, wherever required, during the height of the cold season, and consequently of guarding as much as possible against the injurious effects of heat in transit.

35. For the purpose of carrying out this plan effectually I would invoke the aid of Government. I would venture to suggest that the Secretary of State for India be moved to communicate with the National Vaccine Establishment in London, with the view of obtaining, and of forwarding, an annual supply during the month specified. I would also suggest that the Secretary of State be further moved to request the Directors of the Peninsular and Oriental Company to allow the lymph to be kept in the ice-house of their steamers during the passage from Suez, as was proposed by Government in paragraph 15 of the Resolution passed on the report for 1862. The lymph ought to be forwarded solely in vaccination tubes, a very small number being sent to Aden, and a larger supply to Bombay.

36. In the last report it was mentioned that the plan of vaccination by municipalities, suggested by me in 1863, and approved of by Government, had been commenced by Dr. Plumptre in the Sattara zilla, with the hearty co-operation of Mr. Chapman, at that time the Collector. Several municipal towns were grouped together into a "division," to which was appointed a vaccinator on a salary of 15 rupees a month, and six such divisions were formed. I attached much importance to the commencement of this plan, as it promised to identify local municipal bodies with efforts to render the protective system of vaccination more extended, efficient, and complete.

37. Dr. Plumptre is not altogether satisfied with the result, which he states has disappointed him. The Deputy Inspector General of his Division, however, does not participate in this feeling of disappointment, and sees no sufficient reason for being dissatisfied, merely because the expectations entertained have not been realized to their full extent. In the view thus expressed by Dr. Glasse I fully concur. The scheme, indeed, is so completely in its infancy that it would be premature to hazard an opinion as to its ultimate success. The result at present is, at all events, so far encouraging that nearly 3,000 people have been vaccinated by these six men.

38. In commencing the system, Dr. Plumptre stated that, beyond requiring a monthly return from each of the vaccinators, and examining the quality of the lymph, he should in no way interfere with its working, which ought to

be left in the hands of the municipality which defrayed the expense. The returns, however, appeared to the Superintendent to be so very small, that he proposed to the Collector that a minimum amount of work to be done by each vaccinator should be fixed, and that if he failed to do this, he should receive a salary of only 10 rupees instead of 15.

39. The Collector, however, did not approve of this suggestion, and proposed instead that the Superintendent should take upon himself the entire control of the vaccinators in the way of punishing by fine. The Superintendent objected to this, and, I think, on well-based grounds. His main argument is thus stated:— "If the Municipal Commissions are to be regarded as holding a position analogous to Parochial Boards in England,—and in that light I view them,—to begin a work by taking all independence of action and control from their hands, is the very way to promote apathy and indifference in the discharge of their duties."

40. The position thus taken is not only sound in itself, but is in strict accordance with the view expressed in paragraph 9 of the Resolution passed by Government on the report for 1862. It is there urged that municipalities should employ a vaccinator, "in whose labours, and in checking whose returns, the Municipal Commissioners should be induced to interest themselves."

41. Great credit is due to Dr. Plumptre for the active interest he has taken in the subject of municipal vaccination. In addition to what he has effected in the Sattara Districts, he addressed communications to the Collectors of all the zillas in his circle, respecting the capability and probability of the municipalities, in their respective districts, employing a vaccinator at their own expense.

42. It appears from the replies that there is no Municipal Commission in the Rutnagherry Collectorate, and that no precise date could be definitely fixed by the Collector of Canara at which any municipality in that zilla would be in a position to maintain a vaccinator, although hopes were held out that three or four would do so before very long. It further appears that the municipality of Gokak is the only one in the Belgaum Collectorate which could afford to make even a temporary arrangement, but that three municipalities in the Dharwar Collectorate, two conjointly, and the third singly, would maintain permanent vaccinators.

43. In other parts of the Presidency municipal vaccination has not made much progress. It is, however, so sound in principle that it is to be hoped that efforts will be made to introduce it wherever it can be done, and I trust the other Superintendents, in communication with the civil authorities, will exert themselves to do so. In the meantime I am happy to say that, owing

to the influence of Dr. Lord at Poona, and of Dr. Asher at Tanna, vaccinators have recently been entertained by the municipalities of both these towns. Municipal vaccination has, therefore, now been introduced into the Sattara districts, and at Hooblee, Dharwar, Kotree, Poona, and Tanna.

44. Vaccination in Sind, which for many years past has been in a satisfactory state, has recently been rendered still more effective by the adoption of a plan, proposed by Dr. Pinkerton, the Superintendent, for appointing local vaccinators as a supplementary aid to the Government establishment. Considering the extent and population of the province, and the impossibility of the existing number of vaccinators going over the whole of it sufficiently often to keep the infant population protected, Dr. Pinkerton proposed an addition of 11 vaccinators, to be employed in the same number of different districts, and to be paid out of the local funds.

45. The proposal was warmly supported by Dr. Ritchie, the Deputy Inspector General of the Division, as being well adapted for increasing the efficiency of the department, and for extending its benefits more thoroughly and completely over every part of the province. It was ultimately sanctioned by the Commissioner, who thus unmistakeably proved the deep interest he takes in the subject.

46. Government are aware that some time ago Dr. Plumptre drew up a short paper, descriptive of the facts of vaccination, and illustrative of its benefits. It was written in so plain a style as to be readily understood by the mass of the people. Translations have since been made into Marathi, Gujerati, and Canarese, and copies widely circulated. I have reason to believe that much good has already resulted in those districts in which copies were early distributed, and I have no doubt will also result in those in which there was some delay in doing so. The paper not only brings the subject directly before the people, but being circulated by order of the Civil and Political authorities, it will no doubt have the desirable effect of impressing upon native officials the wishes of Government on the subject, and consequently the importance of their affording every assistance in their power in furthering the cause.

47. In paragraph 12 of the Resolution of Government on the last report, His Excellency in Council expressed an opinion that the translation into the vernaculars, and the publication, of the report and of the Resolution of Government thereon, might do much good, and decided that such should be done, directing me, at the same time, to state whether I thought the plan should be continued.

48. I am as yet unable to form any decided opinion on the point, inasmuch as I have had no opportunity of ascertaining its effect, the translations

not having yet been printed. On the 13th ultimo the Oriental Translator to Government, in reply to an inquiry, informed me as follows:—"The Vaccination Report and the Resolution of Government thereon have been translated into Marathi, Gujerati, and Canarese, and the translations will, as soon as they are settled, be forwarded to the General Department of the Secretariat, from which the necessary instructions for their printing and distribution will be issued."

49. In paragraph 13 of the same Resolution, His Excellency in Council expressed an opinion that it might draw the attention of the people generally to the subject of vaccination, and have a useful effect, were the village officers throughout all the districts required to submit certain statistical returns, therein specified, connected with small-pox, with a view to the publication and distribution of the result.

50. At the end of June, I accordingly requested the Superintendents to put themselves in communication with the Civil Authorities, for the purpose of procuring, according to a form which I forwarded, the statistics specified by Government, and of making them known throughout their districts, embodying the general results in their annual reports, or as soon afterwards as possible.

51. The Superintendents have not yet had sufficient time for procuring the returns, and for embodying the results, but they will be submitted to Government hereafter, should they be considered trustworthy. I almost fear, however, that, in the absence of careful registration, it will be impossible to place much reliance on the accuracy of the returns, and, if so, their publication might prove disadvantageous rather than beneficial. The Superintendent in Sind, indeed, reports that he has received a communication, through the Commissioner, from the Collector of Hydrabad, stating "that even an approximation to the statistics cannot be obtained on account of there being no registration."

52. It affords me much pleasure to state that the Superintendents, generally, express their cordial acknowledgments for the support and assistance they have received from the Civil, Political, and Police Authorities, and even, in some cases, from Native Chiefs. Dr. Butler, for instance, markedly alludes to the great encouragement afforded by the Tarquar of Bhownuggur; and Dr. Dick mentions that the Mahee Kanta Chiefs generally, but especially the Maharaja of Edur, take much interest in the subject.

53. I am happy to report that, almost without exception, the Superintendents worked throughout the year with a zeal, a diligence, and an earnestness deserving of the highest commendation. They left no means untried for pro-

moting the success of the cause entrusted to their care, and the statements in paragraphs 6 and 8 prove how great that success has been. I, therefore, beg to commend to the favourable notice of Government the exertions of Drs. Butler, Dick, Plumptre, Pinkerton, and Turnbull.

54. Nor must I omit to state that, with a few exceptions, the general conduct of the vaccinators was very satisfactory. The good effects of the late decision of Government, to admit these men to the benefit of pensions, is already becoming apparent in promoting industry and good conduct. The knowledge that dismissal now involves the loss of prospective, as well as of present advantages, appears to be exerting a marked influence for good.

55. Before concluding the report I beg to record briefly that, since the commencement of the present year, the Government of India have been pleased, on the recommendation of His Excellency in Council, still further to increase the efficiency of the department by sanctioning several measures which were submitted for consideration. Among these I may mention the formation of an additional circle of vaccination, a small increase to the number and pay of the native vaccinators, and the grant of an additional travelling allowance for the Superintendents. As these subjects, however, do not strictly come within the history of the past year, I merely mention the bare facts, leaving further particulars to be dealt with at the proper time.

I have the honour to be,

Sir,

Your most obedient Servant,

M. STOVELL, M.D.,

Principal Inspector General, Medical Department.

Bombay, 31*st March*, 1865.

INDEX TO THE FOLLOWING REPORTS.

VACCINATION UNDER SUPERINTENDENTS— PAGE.

Central	Circle	1
Southern	do.	4
Northern	do.	7
Sind	do.	9
Kattiawar	do.	12
Rewa Kanta	do.	14
Presidency	do.	15

VACCINATION UNDER CIVIL SURGEONS—

	PAGE		PAGE
Tanna	17	Honore	24
Poona	17	Kaira	24
Ahmednuggur	18	Ahmedabad	25
Sattara	18	Surat	26
Sholapoor	19	Broach	26
Dhoolia	20	Rajcote	27
Nassick	20	Kurrachee	27
Belgaum	21	Hydrabad	28
Dharwar	21	Shikarpoor	29
Kolapoor	22	Kotree	29
Rutnagherry	23	Kutch	30
Vingorla	23	Aden	30

APPENDIX—

Vaccination under Superintendents in British Territory	Table No. 1
Vaccination under ditto in Native ditto	No. 2
Vaccination under Civil Surgeons	No. 3
General Abstract of Vaccination	No. 4
Table of Ages	No. 5
Employment Returns of Superintendents of Vaccination	No. 6

VACCINATION UNDER SUPERINTENDENTS.

CENTRAL CIRCLE.

Superintendent—Assistant Surgeon P. S. TURNBULL, M.D.

Establishment—Thirty-four Vaccinators (Government).

Two Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total. Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government	1863	47,646	....	....	44,629	93·6
	1864	69,299	21,653	....	66,141	95·4
Native Chiefs ..	1863	1,221	....	....	714	58·4
	1864	2,550	1,329	....	2,334	91·5

In commencing the Annual Report on Vaccination, as carried on in the Central Circle for the year 1864, I may remind the Principal Inspector General, Medical Department, that I assumed charge of the Circle on the 19th of April last, and that during the preceding three and half months it was under the superintendency, first, of Dr. Beatty, and afterwards of Dr. C. J. Sylvester, 3rd Regiment N. I.

The working of the establishment has been successful beyond that of any year since the Central Circle of Vaccination was formed. The number of children operated upon, as will be seen above, is 69,299—an increase over the preceding year of 21,653. The number given in the returns as having been vaccinated in 1863, was 48,562; but as this included the returns of the vaccinator employed by the Raja of Akulkote, who is not a Government vaccinator, that number was slightly incorrect. I have, therefore, deducted the returns of this vaccinator from the above number, and added them to the Native Chiefs' vaccinators' returns. It was necessary to make these corrections for the purpose of exhibiting a correct comparison between the returns for 1863 and those of 1864.

This increase in the number of operations is, I think, due to several causes, of which these are the chief, viz. :—1, each vaccinator having been supplied by Government with a permanent peon; 2, increase of the lymph allowance; 3, increased diligence of the vaccinators themselves.

The average number of operations performed by each man is 2,235, an increase over 1863 of 669 per man. The greatest number of operations performed by a single individual was performed by General No. 80, Govind Moray, who vaccinated 4,345, children, and who was *primus* last year also. Close upon him, on the descending scale, come General Nos. 223, 159, and 133, all of whom have vaccinated upwards of 3,000 children. The honor of having vaccinated the smallest number is due to General No. 216, who was dismissed the service in December last for falsification of returns.

I regret much my inability to report an increase in the proportion of children vaccinated under one year. The per-centage to total vaccinated is 11·41, or 1·36 per cent. less than last year : as will be seen below, the per-centage has been diminishing yearly for the last four years; these years show a per-centage as under—

1861	13·42	per cent.
1862	13·55	„
1863	12·77	„
1864	11·41	„
Average for the last four years	12·78	„

I have not failed, whenever an opportunity offered, and they have been many, to explain to the people the immense benefits to be derived from submitting their children to the operation at as early an age as possible. Nor have I failed to impress upon vaccinators the necessity for taking every opportunity " to make parents comprehend its paramount advantages." I have also explained to them how much easier it is to operate on an infant than on an older child, and how much more satisfactory is the result.

From what I have observed, I think there is considerable laxity in the manner in which the age of the child is ascertained. Many of them merely ask what the age of the child is : whether he is above or below one year of age. Now as many, in fact most, of the parents are very obtuse, and particularly so in respect to the age of themselves or their children, I am pretty sure that many children of 10 and 11 months old are put down as over one year: parents scarcely knowing the difference between 10 months and one year. I have actually observed cases of this sort ; but as I have given strict orders to the vaccinators to be most particular in recording the correct age, and, for their assistance, have directed them in all cases to ask the age of the child in months before inserting it in the register, I am sanguine enough to expect that the returns for the current year will show more favorably in this respect.

The lymph has, except in the case of General No. 216, been invariably good throughout the year, and has only required renewal where through the sickness of the vaccinator it became inert. In consequence the vesicles have generally been well formed, and the cicatrices characteristic.

Small-pox has prevailed throughout the Circle, more or less, but never in an epidemic or severe form. Two or three reports have reached me of the existence of inoculators in the Tanna Collectorate, and in each case I immediately requested the Collector to enquire into the matter, and take proceedings against them. The Collector, Mr. Gordon, has informed me that he has no power to punish the inoculator. I pointed out that, in my opinion, paragraphs 269 and 270 of the Indian Penal Code gave him the necessary powers to deal with such persons.

I think it right, the preceding year having been my first in the department, to give an account of the method of inspection which I have adopted and invariably carry out. It is as follows:—

Before entering a talooka I make out a list of the villages in which work has been done, and by this I am guided in the route I take through the talooka.

Before visiting a village, certain preparatory work is gone through; the day previous an order for the collection of all children under 10 years, whether vaccinated or not protected by small-pox, is sent to the patel and kulkurnee, and the vaccinator's returns are inspected and a mark put opposite the particular village.

At the appointed hour in the morning I visit the village and first call for the village register, and, while comparing it with the returns of the vaccinator, the children are collecting, for the order is scarcely ever attended to, till they see the sahib coming, and sometimes not even then. This comparison being over, and the children collected, their names are called over, and as each present answers to the name, the child is brought forward, inspected, and the result noted.

The children are never all presented, but minute enquiries are always made by me regarding the whereabouts of the absentees.

This over, the children are then arranged in a row, and the kulkurnee, pen and paper in hand, goes round with me and writes the name of each unprotected child, in full, as pointed out by me. This list being completed, is signed by the patel, to be afterwards sent to the vaccinator for his information and guidance, and the patel is directed to assemble the children and any others unprotected, when the vaccinator presents the *yad*. The whole of the children are then counted, and the number of those protected by small-pox is noted. The above entails a very great amount of labour, an amount which can only be estimated by a person who has gone through it, but the information so obtained amply repays it.

During December of the past year I personally visited and inspected in this way 40 villages and 3,942 children, and made lists of 995 unprotected children. But I had many difficulties to encounter, among others these, viz:—

1*stly*.—Want of village registers: this I only ascertained on arrival in the late Sholapoor Collectorate, but orders have now been given for their being kept in every village, and the vaccinators are held responsible that they are in the villages in which they may operate.

2*ndly*.—Want of a knowledge of the Canarese language, which is exclusively spoken on the south of the Bheema River in what now forms the Collectorate of Kulludghee.

Though I have made numerous enquiries from mamlutdars, jagheerdars, fouzdars, patels, kulkurnees and others, I have not been able to meet with any striking facts worthy of being published, proving the benefits of vaccination; but I can say that I have never seen a single child, on whose arm an undoubted cicatrix was visible, who was also marked with small-pox cicatrices. I have paid much attention to this subject.

SOUTHERN CIRCLE.

Superintendent—Assistant Surgeon F. H. PLUMPTRE.

Establishment—Thirty-one Vaccinators (Government).
Twenty-two Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government	1863	28,680	....	....	26,992	94·1
	1864	34,708	6,028	....	32,767	94·4
Native Chiefs ..	1863	15,319	....	....	14,288	93·3
	1864	18,816	3,497	....	17,345	92·3

The above comparative table, satisfactory as it is, as showing an increase over the preceding year of no less than 9,525, and presenting a larger amount of vaccination than has ever been previously shown in any Annual Report from this Circle, does not embrace the working of the vaccinators employed under certain of the Municipal Commissioners existing in the zillahs of my Circle. The operation of this system commenced only in January 1864, and imperfect, and I must add unsatisfactory, as the results from this branch have been, the total of the working is as follows:—

Number of operations performed by the vaccinators employed under the Municipal Commissioners in the Southern Circle of vaccination 2,834.

This number, therefore, added to the combined result of the Government and Jagheerdar Establishments, shows that the actual increase in my Circle during 1864, as compared with 1863, is 12,359.

For an increase so large in the Government Establishment, causes which have tended to promote it must be sought. This is not a difficult task, as during the year under review more changes have been introduced for the effectual working of the establishment than have ever been previously made in the same space of time. I propose to enumerate these, not in the order of their importance, but in the order of their introduction, and will then consider each separately, and the amount of importance I am disposed to assign to them.

1*stly*.—Sanction of grain compensation allowance to the members of the Vaccine Establishment.

2*ndly*.—A more extensive publication of the benefits of vaccination, and its nature, by means of hand-bills distributed and posted in village chowdies throughout the zillahs of the Circle.

3*rdly*.—An increased amount sanctioned for the conveyance of children with vaccine vesicles for the purpose of carrying on direct vaccination.

4*thly*.—The establishment of a separate body of peons to assist the vaccinators in their duty, thus relieving them of the necessity of depending upon the casual aid of peons and police, previously afforded by the mamlutdars and fouzdars of talookas.

5thly.—The addition of a second karkoon to the Superintendent's office.

6thly.—The admission of members of the Vaccine Department to the benefits of the Pension Rules.

7thly.—The increase of four members to the permanent establishment of the Circle.

To the foregoing causes, which I have assigned as bringing about this increase, I must add one more which I believe has had an important influence, namely a system, I established on joining the Circle in 1863, of granting pecuniary rewards to those vaccinators who have distinguished themselves for industry and good conduct during the year. The fund from which I am able to make these rewards is the accumulation of the fines and forfeiture of pay for misconduct during the year. In this manner I found at the end of 1863 a balance of Rs. 68. I am aware that this plan is, strictly speaking, irregular, and that the money so accumulated should have been paid to the credit of Government. However irregular it may be, it is the very reverse of any misappropriation. The money was originally sanctioned for vaccinating purposes, and is expended in promoting the same; if repaid to Government the amount would be almost inappreciable in the general estimates of the year, while appropriated in the manner I have described, it purchases the largest results at the smallest possible cost.

In the month of September last I received a supply of capillary tubes for the preservation and transmission of liquid lymph. I have not as yet had sufficient experience with them to enable me to make anything like a satisfactory report of their value in this country, but of this I feel satisfied, that for general use among the vaccinators they are totally unsuited. The mere charging the tube is simple enough; but closing the extremities, and preventing over-heating of its contents, is a much more delicate operation than is generally supposed, and for which the coarse country oil light is quite unfitted. From the lymph supplied to me in tubes on two or three occasions from Bombay, when I was Civil Surgeon of Tanna, I could never succeed in establishing vesicles, and I believe the same has been remarked by other medical officers, who have tried tubes charged in this country. If further experience proves this to be correct, the cause no doubt is to be found in the fact, that in the tropics the lymph in the tube is already some 35 or 40 degrees higher than in a temperate climate: the additional heat required for the melting of the glass and closure of the extremities, rapidly conducted to the interior of the tubes, raises the temperature of its contents to a point which destroys the vitality of the lymph. To remedy this, I intend shortly to try some experiments of closing the tubes with hard varnish, which would obviate the objections to the heat-destroying theory.

Seeing, however, the important results of a single capillary tube from Europe, given by a German missionary some years ago to Mr. Mills, from which single source it would be impossible to state how many thousands or tens of thousands have been protected from small-pox, I would strongly suggest the advisability of obtaining at regular intervals (say quarterly) supplies of vaccine lymph in tubes from the National Vaccine Institution in England. This plan has the threefold recommendation of being able to rely upon the quality of the lymph, and involving but little trouble and less expense. These tubes on their arrival in Bombay might be distributed among the Superintendents of Circles; thus there would be a continuous supply of fresh matter coming into the country, and the fear which has been expressed, that the prophylactic in the course of years in a hot climate wears itself out and ceases to possess its special properties, would be removed.

Vaccination under the Native Chiefs exhibits a more satisfactory increase than I had expected, which I am inclined to attribute to the fact that, during the latter part of 1863

and the beginning of 1864, I visited the whole of the Kolapoor Native State, as well as some of those in the Belgaum Zillah, which gave at least a temporary stimulus to the vaccinators and the native officials. I have also been able to make some improvements in the position of the former, and, through the aid of the Political Agents, have obtained in some instances an increase to their pay, corresponding to the increase which the Government vaccinators draw as grain compensation allowance. More expeditious payments to the vaccinators is another point I have brought to the notice of the Political Agents, and also in one instance have had the pay changed from a fictitious to an actual coinage: the standard rupee being substituted for the hookeree rupee, a coin worth some two or three annas less. The more I see of the Native Chiefs, the more am I compelled to agree with the opinion of my predecessors, that there is little or no real interest felt by them in the promotion of vaccination in their States. Vaccinators are maintained only because they know it to be the wish of the Government. The Chiefs of Veeshalghur and Sawunt Warree are, perhaps, exceptions to this general assertion. In my Report for 1863 I mentioned that in a personal interview with the Chief of Sanglee (whose jagheer includes about 350 towns and villages distributed over an immense area of country) I had represented the insufficiency of only one vaccinator for the work, and obtained a half promise from him that another should be engaged. After a great deal of delay I received a final answer from him in December to the effect that he declined to accede to the proposal.

I cannot but regard vaccination under the Municipal Commissioners as the most unfavorable portion of the whole of this Report. The system, it is true, is in its infancy, the first year of its existence having hardly been completed at the time this Report is being prepared; but still I am compelled to admit the result has disappointed me. On my introducing the system into the zillahs of this Circle I distinctly stated in my letter to the Collectors that, beyond requiring a monthly return from each of the vaccinators and examining the quality of the lymph in use, I should in no way interfere with the working of the establishment. Had I rigidly adhered to this resolution, the result of the system would have been much more unsatisfactory than it has already proved, and to prevent an utter failure I have written letter after letter on the subject of the small returns received. At last, in September, I proposed to Mr. Chapman, the Collector of Sattara, a difference in the system of payment of the vaccinator which in the case of those employed by the Municipal Commissioners was one very easy of adoption, namely fixing a minimum amount of work to be done by each vaccinator. If he failed to do this minimum, he would receive only Rs. 10 of his salary; if he exceeded it, then he would draw the full amount of Rs. 15 a month. This proposition Mr. Chapman refused to accede to, and requested me to take upon myself the whole control of the vaccinators in the way of punishing by fine, as I do with the Government vaccinators. This I declined to do, as such a course seemed perfectly unnecessary, considering that, in the case of the Municipal Commissioners, the employers and the employed, both being on the spot together, nothing can be easier than for the members of the Commission to see that their vaccinator works to the full of his powers. The policy of my taking all the control of these men on myself seemed to me questionable. If the Municipal Commissioners are to be regarded as holding a position analogous to Parochial Boards in England, and in that light I view them, to begin a work by taking all independence of action and control from their hands, is the very way to promote apathy and indifference in the discharge of their office. The great thing is constantly to have it urged upon them, that their apathy is expensive to themselves, and that if they take no interest in seeing that their servants do their work properly, they, the masters and payers, are the people who suffer from the neglect.

NORTHERN CIRCLE.

Superintendent.—Assistant Surgeon R. DICK.

Establishment.—Thirty-four Vaccinators (Government).

Eleven Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Percentage of Success.
			Increase.	Decrease.		
Government	1863	49,346	....	....	43,629	88·4
	1864	67,487	18,141	....	61,741	91·5
Native Chiefs ..	1863	16,317	....	....	14,156	86·7
	1864	19,564	3,247	....	17,840	91·2

The number of operations recorded in 1864 exceeds that of the previous year by 18,141. This increase is due principally to the establishment of peons who were entertained some in February and some in March. These peons, as was anticipated, have proved the stimulus requisite for stirring up the general indifference of the people and securing more active assistance from the village officers. Pains have been taken in selecting, as far as possible, men of intelligence and conciliating manners,—in short, those best suited for their duty.

Much assistance has also been received from the method of causing the village officers to prepare lists of unprotected children. Attempts had been made in former years to introduce this measure but ineffectually, as explained in last annual Report. On receipt of Government Resolution No. 1100, dated 25th June 1864, paragraph 4th of which authorises superintendents to cause the village officers to prepare these lists, I endeavoured to carry out the measure in a more systematic manner by sending a letter to the patel and tulatee of each village, directing them to make out the list in a lithographed form, and give it to the vaccinator on his coming to commence operations. The measure, thus modified, is of more extensive application than as described by the Superintendent Central Circle, who seems to have adopted it only in such villages as he actually visited. The village officers have in most instances made out the list on receipt of a special letter calling for it, although they had almost entirely disregarded the circular orders to the same effect previously issued. Some, however, still evince carelessness, either omitting a number of names, or delaying or altogether declining to fill in the form; and I am inclined to think that these objections would disappear if the lithographed letter calling for the lists instead of being signed by me were issued from the mamlutdar's office, and the village officers directed to send the forms when filled in to the mamlutdar from whose office the vaccinator would receive them. A part of the increase is also due to two additional vaccinators who have been at the work since September.

Of the total number, 54·6 per cent. were males and 45·4 females. Under the head Circles, 84·3 per cent. were Hindoos and 8·6 Mussulmans. The proportion of other castes is larger than in former years, amounting now to 6·7 per cent. and the Parsees also have increased, but their number is still insignificant, being only 159 or 0·2 per cent. of the total. Under the head of Age, 48·3 per cent. were under, and 51·7 above, one year. The former class preponderated in 1863, and the reason that older children are now in excess, is that up to this time certain villages, in consequence of their distance from the vaccinator's residence or some other cause, had been seldom or never visited, and consequently a larger number of unprotected children, or even adults, had accumulated in them. These arrears are now being cleared off; and as the present establishment, with the support it now receives from Government, is able to visit almost every village in the Circle in a year, there is every reason to hope that the report of 1865, or at any rate those of subsequent years, will exhibit a large excess of infants.

The vesicles have been normal in appearance and filled with abundance of pure lymph. In the monsoon, however, they generally burst too early, and during that season normal crusts rarely form. On the return of the cold season, however, they resume the normal appearance and present well-formed crusts.

Small-pox was nearly absent from the Surat and Broach Districts. It appeared in a number of villages of Kaira Zillah in February, March, and April, and I have no doubt would have been very prevalent and caused large mortality if most of the villages had not been carefully gone over by the vaccinators a few months previously. Measures were taken to arrest the disease by vaccinating all the unprotected children in the villages as rapidly as possible. With the exception of the cause referred to in last annual report, inoculation was not heard of, and as the practice is confined to narrow limits, viz. Bulsar and Bugwara, I have little doubt it will soon be entirely supplanted by vaccination, which is making considerable progress.

The number of capillary tubes received, although not sufficient for general use by the establishment, was sufficient to show that the vaccinators can be taught how to charge them. The tubes, although they are excellent means for conveying lymph, are not free from objections. The contained lymph sometimes decomposes, and if made use of at a particular stage may produce the same ill effects as other decomposing animal fluids. The contents of some tubes received from England had become quite fœtid, and one instance came to my knowledge in which lymph from a tube charged by me caused boils on the child's arms which gave rise to a good deal of uneasiness on the part of the parents. In this case the lymph was several days old, probably a week or more, and had been exposed to the heat of the sun in transit by post: but I believe if the tubes were filled with perfectly pure lymph free from pus and blood, and preserved carefully from heat, and the lymph made use of a few hours after being taken, the result would generally be satisfactory.

The Native States' returns exhibit an increase of 3,247. The whole of this occurred in the Palunpore State, and was owing partly to increased industry of the vaccinators and partly to an additional vaccinator entertained by the Dewan of Palunpore at the instigation of the Political Superintendent. The Mahee Kanta vaccinators have suffered from ill health to such an extent that, although the exertions of the Political Agent in the propagation of vaccination are unceasing, yet there is a falling off in their operation of 1,137. This was expected by me a year ago, as mentioned in last annual report, but there is little doubt that the decrease will be only temporary, as the Mahee Kanta Chiefs generally, and more especially the Maharaja of Edur, manifest considerable interest in the vaccinators' progress.

SIND DIVISION.

Superintendent—Assistant Surgeon J. PINKERTON, M.D.

Establishment—Seventeen Vaccinators (Government).

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Viccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	39,443	....	....	37,791	95·6
1864	46,440	6,997	....	43,151	92·9

The increase in the number of operations this year is due to—first, the vaccinators having worked steadily and well throughout the year; one only was absent from his district on account of sickness for a short period; second, two additional vaccinators were appointed on the establishment in the month of August, the amount which they have contributed to the increase is 1,113; and, third, the appointment of a peon for each vaccinator since April last, has no doubt helped to increase the number vaccinated; but I apprehend that the increase on this account in Sind will not be so great as in other Circles, because generally the Deputy Collectors supplied a peon to each vaccinator, and it was only rarely that they could not give one.

The lymph which is in general use has been unrenewed for I know not how many years, not certainly in the last decade; it is good, although the vesicles are not so large as in Europe, but they are perfect as regards shape and progress: they are smallest in the hot, damp, and largest in the cold months of November, December, and January. During the year the lymph of only one vaccinator, General No. 185, Damoo Mull, was found so much deteriorated, that it had to be abandoned. The lymph of two other vaccinators, General No. 197 and General No. 212, in the hot months of April and May, produced very small vesicles, but under my care and selection in the course of the first week of June it produced very fair vesicles. In the month of March I received a few hundreds of empty capillary tubes from England, and commenced a trial of them in the hot months of April, May, and June, but I did not succeed in carrying lymph in them until towards the end of July. In August I received a few capillary tubes charged with lymph from England, and on the 15th of that month I vaccinated three children from the English tube-lymph, and also a few children from Sind tube-lymph. All the latter were successful: of the three vaccinated from the English tube-lymph, one child had a larger vesicle than I had ever before seen in Sind, and another smaller vesicle: the other two children were unsuccessful. From the single larger vesicle I vaccinated a few children and produced splendid vesicles. In September I charged 50 tubes from this new lymph and distributed them to several vaccinators, but only two men reported a successful result; this is not to be wondered at, seeing they had never seen a capillary tube before. I also sent five tubes to Assistant Surgeon Moore, of the Joudpoor Agency, who reported unfavorably of the result. I have again (November 5th) sent him more, but do not know what has resulted from their use. Capillary tubes will be of

great use for carrying lymph long distances, but I think it very improbable that they can be always used instead of a child with fresh lymph on the arm; certainly not, if we want much work done.

At the end of 1863 and beginning of 1864 there was a severe epidemic of small-pox in the town of Kurrachee; the disease also existed in the adjacent districts, especially in the Kardarate of Meerpoor Saera. There were also a few sporadic cases in other talookas which I do not consider require particular notice. The epidemic which occurred in Kurrachee and its neighbourhood was both severe and prolonged; of the town of Kurrachee it is not my province to speak, as it is under the Civil Surgeon there. But when I went into the hills lying between Kurrachee and the Khan of Khelat's territory towards the Hubb River, I saw a number of children who had been recently inoculated, and on making enquiries I found that at least two individuals had practised inoculation in that direction, and that they carried the disease from the Khan's territory to Kurrachee, and as soon as the disease took its terrible hold on the town they went off, but I could not learn where they belong to; the people said that they did not know anything about where they lived. Some of the children had been unsuccessfully inoculated, and the parents were very irate, as they had paid the inoculator, who had not returned to see the result of his work.

At the opening of the year I was engaged examining the work of General No. 165, Gungaram, in the Mehur District, which I found satisfactory. Thence I passed into the Larkhana District, where I examined very closely the work of General No. 27, Luchmon, and found it generally well done, his records true, and lymph good. But the marks on the arms of some children who had been vaccinated during the preceding inundation months were not very good, and showed that the size of the vesicles had diminished considerably; but with the cooler weather and careful selection, he had brought it up to what I saw. Afterwards I marched into the Sukkur District, and there examined a very large number of children who had been vaccinated by General No. 114, Assoo Mull. This vaccinator had done an immense deal of good work, his records were true, and his lymph good. I consider this man's work highly satisfactory. After going through Sukkur and Shikarpoor Districts I crossed the Indus and came down through the Roree District, in which I examined the work of General No. 79, Suroopsing. I found his records true and his lymph good. I consider this vaccinator's work also highly satisfactory. Suroopsing has been some years in this District, and seems generally to have won the confidence and good will of the people there; still he occasionally meets with some difficulty. I have much pleasure in stating that the Deputy Collector, Mr. Foxton, has at all times given him every assistance in the way of persuading those who offered opposition. Such an interest shown by the district officer is of the very highest benefit in spreading vaccination. In the town of Rorce I examined the children vaccinated during the year 1863 by the first hospital assistant; the work had been well done, as far as I could test it, perfectly truthful, and his lymph was good. Here in February I saw H. H. the Ameer of Khyrepoor's vaccinator. He said he had vaccinated some hundreds of children during 1863; he showed me his register, which was neatly and well kept. I did not inspect any of his work; at the time I saw him, his father (who was H. H. the Ameer's *Hakim*) was ill and dying, so he could not leave him; otherwise I meant to look at his operations,—Captain Dunsterville, the Collector of Shikarpoor, having very kindly obtained H. H. the Ameer's consent to my inspecting the villages gone over by H. Highness' vaccinator. I have never received any reports from H. Highness' vaccinator; I am therefore unable to say whether vaccination is being carried on in the Khyrepoor territory or not. I have written to Captain Dunsterville to ascertain.

From Roree I marched through the Khyrepoor State and *vid* Sukkrund and Kefroah to the Oomerkote districts: *en route* I saw a few children in Taroosha, who were vaccinated in that town by the hospital assistant there. In the Little Desert I examined the work of General No. 199, Allah Bux, and found it satisfactory. Here I saw many adults who had freely submitted themselves. A vaccinator had never before been here, and though the population is thin, still this man had done a good deal of work; whole villages, young and old, were vaccinated; they appeared very thankful for the services of the vaccinator. The vaccinator said, that on first coming among these desert people they were very shy of him, but after they became acquainted with his practice, they very willingly and gladly availed themselves of the blessing sent them. Although this vaccinator is very young, he carried on his duty among those peculiar people with very praiseworthy discretion. Many people came across the boundary from the Khyrepoor State to have their children vaccinated by him, and also from the Jeysulmeer State. After crossing the sand hills I went into Oomerkote, where I saw a few children who had been vaccinated during the year by the hospital assistant there. Here I met Captain Tyrwhitt, Political Superintendent of Thurr and Parker, who takes a very great interest in vaccination; he looks upon it as a sure means of increasing the population of his thinly peopled districts, and would gladly employ six vaccinators in his districts, but I am sorry to say that I have only been able to spare him three. However, I shall now be able to give him at least one more out of the Local Establishment. The hospital assistants in his districts are working well, and with the amount of attention and care given to the spread of vaccination by Captain Tyrwhitt, these districts will soon be as well protected as Sind. After passing through Oomerkote I examined the work of General No. 142, Chellah Ram, in the Nubeesur Tappa, and found it satisfactory in quality. From the Thurr and Parkur Districts I returned into the Halla District, and in the Kardarate of Shahdadpoor I examined some recent work of the head vaccinator, which was everything I could desire. Thence I passed through Hydrabad into the Mahomed Khan's Tanda District, where in the latter end of April I examined the lymph of General Nos. 212 and 197, and found the vesicles very small, and numbers requiring to be re-vaccinated. These two hands were not vaccinating as carefully as they ought to have done. The lymph in use had shortly before been received from the Civil Hospital of Hydrabad, and had been just before that propagated from tube-lymph received from London by Dr. Riddell. When I saw it, the vesicles were very small and some of them badly shaped; however, there were many characteristically formed. I took the vesicles under my own care, and by carefully selecting the best and vaccinating from them, it improved very quickly, and in the course of two weeks produced good vesicles; afterwards I took this lymph with me into Shahbunder District and set it going in Meerpoor Buttora, where I had it under observation for several weeks longer; the vesicles improved rapidly in size and their course and progress were also correct. I examined the work of General No. 212 in the Mahomed Khan's District, and found it satisfactory, with the exception of what I have said regarding the lymph. The head vaccinator went through this apprentice's work to see if any of it required doing over again; he reported that generally the children bore good marks. Those I saw myself had very few unsuccessful or bad marks among them; the lymph seems to have deteriorated just about the time I first saw it. In Meerpoor Buttora I examined a good many children who had been vaccinated by the assistant apothecary. In Shahbunder District I examined many villages in the Jar Tappa, which had been gone over during the previous inundation months by General No. 197, Ichangee Mull; I found that he had done his work well. From Shahbunder I again crossed the Indus into Jerruck District, and then in the Meerpoor Sacra Kardarate in the month of

July. I examined the work of General No. 185, Damoo Mull; I found it generally well done and his records satisfactory, but his lymph had very much deteriorated. I took him into Kurrachee to get good lymph, which I soon established in this Kardarate. At this time there were a good many cases of small-pox in the town and neighbourhood of Saera. The disease, as I have already said, had been kept up by an inoculator. As soon as he ceased to inoculate, the disease also ceased. In the month of September I went into the hills near Kurrachee and examined the work of General No. 148, Lalloo, and found it satisfactory; here the population is very spare, and I had to ride long distances to see very few children. Towards the end of October I commenced my cold season tour, and at the beginning of November I again examined Damoo Mull's work in the Meerpoor Saera Kardarate, and found him working well; passed up through Jerruck, there taught the hospital assistant the use of capillary tubes. In December I examined the work of General No. 108, Mehar Chand, in the Sukkrund Kardarate, and found it satisfactorily done, his records true, except as regards ages: last year I had to bring this man to notice for falsifying his records. I am happy to say that this year his register was all correct, with the exception of errors in the columns of ages. Afterwards I crossed the Indus into the Sehwan District. In the town of Sehwan I saw a few children who had just been vaccinated by Mr. Apothecary Pollard from glass lymph. The vesicles were all bad; I vaccinated two children from tubes, and one of them eight days afterwards had very good vesicles. Leaving Sehwan I passed through Tulti and Cachar Tappidarates, examining the work of General No. 77, Jettah Mull, *en route*. I found his records correct, and the work well done. I could not say so much for him in my former report.

I will conclude this *resumè* by saying, that I have travelled and examined work in every district of Sind, with the single exception of the Jacobabad district (in which there is none to see). I have gone over fourteen vaccinators' and seven medical subordinates' (in medical charge of dispensaries) work. I travelled 1,528 miles between stations, and I saw 10,297 vaccinated children in 565 villages.

KATTYWAR CIRCLE.

Superintendent—Assistant Surgeon E.R. BUTLER, M.D.

Establishment—Eight Vaccinators (Government).

Twenty Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
			Increase.	Decrease.		
Government....	1863	5,415	....	....	4,951	91·4
	1864	6,682	1,267	....	6,173	92·4
Native Chiefs ..	1863	15,704	....	....	14,099	89·7
	1864	20,007	4,303	....	18,365	91·7

It is with much pleasure I have to report a large increase in the total number of children vaccinated during the year 1864, not only in comparison with the year 1863 but with any previous year, the total number vaccinated, as per return 26,689, showing an increase of 5,570 on the year 1863, and an increase of 4,467 on the greatest total of any previous year. The increase is due equally to the greater number vaccinated both by the Government and Chiefs' vaccinators. The principal reasons of the increase are, increased assistance rendered by the Chiefs, the great support given by the Political Agent and his assistants, the greater activity of the assistant vaccinators, and, lastly, the people are beginning to respond to the interest the Governor and Government take in the subject.

To the Thakoor of Bhownuggur great thanks are due for his continual countenance and assistance in forwarding the spread of this valuable preventive agent; he has just appointed a fourth native vaccinator for his talooka, and a superintendent on 25 Rupees per mensem. I have only two serious complaints to make about the Chiefs, one against the Wurdwan Durbar for decreasing the vaccinator's pay to Rupees 7-8, and the other against the Rajkote Durbar, who, on appointing a vaccinator of their own, prohibited the station vaccinator from propagating the lymph. The consequence was, that he was unable to circulate the lymph, and till fresh was procured nearly a fortnight was lost; there are not sufficient children in the station of Rajkote to keep vaccine in circulation, and unless the town of Rajkote and a few of the surrounding *gaums* are placed in the charge of the station vaccinator it would be impossible to keep up a fresh supply of lymph for the station. I have reported the matter to the Political Agent, who, I hope, will make a satisfactory arrangement. The minor complaints against the Chiefs are, keeping their vaccinators in arrears of pay, and employing them on other duties; on the whole the Chiefs have given more assistance during 1864 than any previous year. Three *chota* Chiefs who had steadily refused to have their children vaccinated, on my telling them the Governor had all his children vaccinated, at last consented. The increased activity of the assistant vaccinators is sufficiently proved by the return.

The per-centage of success again shows an improvement; this is attributable, as last year, to the still greater care and attention of the assistant vaccinators and the improved state of lymph. I hope it will continue to improve, as I have lately introduced some new lymph from Ahmedabad which is superior to the old Kattywar lymph; at present it has only been propagated in one talooka, but I have forwarded supplies of it in tubes and on glasses to three other talookas. The lymph, when practicable, is taken fresh from child to child, but when the *gaums* are far apart, on glasses. My assistant vaccinators have not yet learnt to fill tubes; I have tried to teach three of them, but at present they have not succeeded in sending me a single tube fit for use. The only tubes forwarded for transmission of lymph have been filled by myself and by the 1st assistant vaccinator, my writer; I am happy to state that I have not had to discharge a single vaccinator in 1864.

Although I travelled over nearly three-fourths of Kattywar, and examined most of the vaccinators' work last year, it gives me pleasure to record that I did not find a single false return. During the early part of the year small-pox raged in two large towns—Verawul and Puttun—belonging to the Nawab of Joonaghur, and later several cases were reported from Bhownuggur. In the year 1864, during the six months I was travelling in the districts, I examined the work of 19 vaccinators; for four months and a few days I was detained in Rajkote on account of the rains and my civil duties, and for nearly two months in the hot weather doing Dr. Burrowes' duty, who had gone on leave. In October, November, and December the Kattywar Field Force was placed under

my charge, and from having to remain so much with it, cholera having attacked the troops, I was unable to visit as many *gaums* as I otherwise should have done. I have had Dr. Plumptre's hand-bills freely circulated, and have explained to the people personally the benefits to be derived from vaccination.

REWA KANTA CIRCLE.

Superintendent—Assistant Surgeon W. FLEMING.

Establishment—Five Vaccinators (Government).
Five Vaccinators (Native Chiefs).

ESTABLISHMENT.	Years.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
			Increase.	Decrease.		
Government....	1863	3,002	....	....	2,714	90·4
	1864	3,195	193	....	2,906	91·0
Native Chiefs....	1863	4,089	....	....	3,614	88·4
	1864	3,264	....	825	3,069	94·0

There has been an increase this year of 193 over the last in the number vaccinated in the Punch Mahals. This increase is small, but it must be remembered that the population in the Mahals is stationary and has been so for some years. I, therefore, think that a large increase every year is hardly to be expected. My tour commenced on the 1st of December, having been up to that period in charge of the Guzerat Bheel Corps and Gaol of Dohud; since the 1st of December I have visited upwards of 69 villages and seen 504 children in the Punch Mahals and Rewa Kanta, and before the conclusion of my tour I expect to visit the work of all the vaccinators in my circle. The districts already visited are Kalole, Godra, Barria, and portion of Narrokote. The districts in the Punch Mahals that I have already seen I consider very well protected. The Godra vaccinator was able to show me work in 81 villages in the Godra Purgunnah. I introduced fresh lymph into the Circle a few months ago, which I procured from Dr. Dick, of the Northern Circle. My vaccinators reported very favourably of it, and it was distributed in the capillary tubes furnished by Government. The vaccinators in the Punch Mahals have had their pay raised from 13 to 18 rupees per month, they have had general numbers given them, and their status fixed as assistant vaccinators. This has begun to work very well, but I would recommend that apprentices should also be sanctioned, as there are none at present. The conduct of the vaccinators has been correct, with the exception of the Kalole vaccinator, who was discharged for misconduct; generally speaking their work has been good, particularly that of the vaccinator of Godra, who has vaccinated double the number of any other man in the Circle. I have distributed the Guzeratee circular of Dr. Plumptre in nearly all the villages that I have visited, but there seems to be very little difficulty in procuring children for vaccination in the Punch Mahals.

I regret I am unable to report so well of the Rewa Kanta. The decrease this year is owing to the idleness of the vaccinators and the indifference of the Native Chiefs. The vaccinators' pay in the Rewa Kanta is so small that they are perfectly indifferent about their situations, and frequently leave them without giving any notice whatever. I am endeavouring to rectify this, and have procured an increase in the pay of three vaccinators out of the five employed in the Rewa Kanta. Two of the vaccinators resigned their situations and two have been dismissed with the sanction of the Political Agent during the last year.

PRESIDENCY DIVISION.

Local Superintendent—Sub-Assistant Surgeon ANUNTA CHUNDROBA.

Establishment—Three Vaccinators.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease		
1863	7,016	....	....	5,494	78·3
1864	7,495	479	....	5,696	75·9

During the year ending the 31st December last, 7,495 children were vaccinated, being an increase of 479 over the total vaccinated in 1863. Of these 4,738 were Hindoos, 1,169 Mahomedans, 852 Christians, 566 Parsees, and 170 of all other castes; 4,197 were males, 3,298 females; 3,253 under, and 4,243 above, one year of age. Of the total operated on, 5,696 proved successful, 769 failed, and in 1,030 the result could not be ascertained. The per-centage of successful on the total vaccinated is 75·9. Many children could not be found out after the operation, and they are consequently returned as doubtful. A large portion of these may reasonably be expected to have been successful.

During the year under report nothing particular occurred requiring special notice beyond a little deterioration of the lymph during the months of June, July, and August. On account of our inability to procure good vaccine lymph from any out-station, the number of children vaccinated during these and subsequent months was comparatively few—so much so as to have attracted the attention of the Principal Inspector General of the Medical Department.

In a letter dated the 31st August last, I fully explained causes of the deficiency, and also explained certain arrangements I had made with Drs. Nicholson and Atkins, in medical charge of the two Native regiments stationed in the island. These gentlemen, as stated in the letter referred to, kindly consented to send a few children in rotation from amongst the unprotected ones belonging to the regiments under their charge, to be vaccinated; and when successful to send them back again, on the eighth day, to supply us with fresh lymph, thus enabling me to have an independent supply of good lymph on which I could

fully rely. They obligingly fulfilled their promise, and though no fresh supplies of lymph were received from the Mofussil I was enabled to establish a supply of excellent lymph, and at the same time to vaccinate a great many children.

Unlike the previous year, small-pox did not prevail, during the last months of the year, to any appreciable extent; and thus the total number for the year, though greater by a few hundreds than in the year preceding, yet did not come up to what was expected at the commencement of the year.

VACCINATION UNDER CIVIL SURGEONS.

TANNA.

Assistant Surgeon J. G. ASHER, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	71	....	....	61	85·9
1864	64	....	7	51	79·7

Early in the year vaccination was carried on in the town of Tanna by one of the Central Circle Vaccination Establishment, whose operations will of course be included in the returns of that Circle.

At my instance a vaccinator has been lately entertained by the Municipality, and the work reported for 1864 has been accomplished within the last three months through his instrumentality.

POONA.

One Vaccinator under the Civil Surgeon,

Surgeon R. G. LORD, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	1,918	....	....	1,587	82·7
1864	1,878	....	40	1,555	81·7

The vaccinator has kept up his work regularly throughout the year, and been useful not only in his own district, but as a means of supplying good and fresh vaccine infection to European hospitals and families in the vicinity. One vaccinator is not enough for a town like Poona

containing over 80,000 inhabitants, exclusive of the adjoining Civil Limits, where this man's duties also call him. The Municipality should be called on to divide the city into districts, and appoint a vaccinator to each.

AHMEDNUGGUR.

One Vaccinator under the Civil Surgeon,

Surgeon W. DAVEY (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	1,260	....	....	1,017	80·7
1864	1,413	153	....	1,236	87·4

Dr. Fraser records that vaccination was diligently and successfully kept up in the city and neighbourhood of Ahmednuggur by the station vaccinator, and by the establishments of the Civil Jail and Police Hospitals within their respective departments during the year 1864. In the city and neighbourhood of Ahmednuggur were vaccinated by the station vaccinator 1,413, of whom 1,236 were successful, 104 unsuccessful, and 73 doubtful. The per-centage of successful cases is 87·4, which is the highest success recorded for several years, and may be taken as a proof of the goodness of the lymph and of the skill of the vaccinator. The table shows the work done by the station vaccinator in the year 1864 as compared with the previous year, and is satisfactory as showing that vaccination is appreciated by the people and attended to by the vaccinator. Regarding the sex, age, and caste of the vaccinated, I find that 846 were males and 567 females; that of these 619 were under one year and 794 above that age; that 39 were Christians, 1,230 Hindoos, 143 Mussulmans, and one Parsee.

SATTARA.

One Vaccinator under the Civil Surgeon,

Assistant Surgeon H. V. CARTER, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	3,832	....	....	2,924	76·3
1864	2,230	....	1,602	1,719	77·0

The total number of vaccinations, as shown above, is considerable, being in fact larger than any recorded in the annual reports for the previous 10 years, the year 1863 excepted; yet in comparison with this year a large decrease is noted. The explanation of this decrease seems to be manifold. Firstly, additional vaccinators were established in districts around Sattara in the earlier part of the year (as at Wai, Karar, Walwa, Wurooj, Malseerus) from all of which localities children were formerly brought to Sattara. These new vaccinators are in pay of the local municipal authorities, and report to the Superintendent of Vaccination. Secondly, cholera was widely prevalent in the Sattara Collectorate during the fore part and middle of 1864; and as is usually the case at such times, the inhabitants are so stricken with fear that the voice of the vaccinator is unheeded. Thirdly, small-pox was unusually rare in 1864; hence the people had not the utility of vaccination so immediately brought to their notice, and so far failed to appreciate it. Perhaps the next most notable feature in the return is the much larger proportion of children vaccinated, under one year of age, amounting to near 61 per cent. in comparison with about 40 per cent. in 1863.

SHOLAPORE.

One Vaccinator under the Civil Surgeon,

Assistant Surgeon C. F. OGILVIE, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	1,438	....	....	819	56·9
1864	1,459	21	....	782	53·6

During the past year, the number of persons vaccinated has amounted to 1,459, of which 663 were males and 796 females; 519 were children under one year, and 940 were above that age; 782 were successful, 373 were unsuccessful, and 304 doubtful, the per-centage of success being 53·6. As compared with the previous year, there is a trifling increase in the number of persons vaccinated, viz. 21. The per-centage of successful cases recorded, is less than in the previous year, that having been 56·9. The apparent want of success I stated in my last report, was owing to the carelessness of the parents in preserving the pustules: and I regret to state they seem very careless of the result of the operation, notwithstanding I frequently personally explained to them its importance as a preventive against an attack of small-pox.

DHOOLIA.

One Vaccinator under the Civil Surgeon,

Assistant Surgeon C. K. COLSTON.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase	Decrease.		
1863	732	....	....	655	89·4
1864	764	32	....	692	90·5

Vaccination has been performed in this station twice a week, and with about the usual result and under the usual difficulties in carrying it out fully, through the apathy and passive opposition of some classes of the community, though one would think that the most impenetrable mind could not but discover the benefit of the prophylactic against small-pox in the almost entire immunity from that disease, year after year, of the inhabitants of this town. No one class or caste in particular, as the return shows, appears to me to object from religious prejudices to vaccination; in fact, when it is brought to their doors, one and all seem to appreciate it, but some object to lymph being taken from the arms of their children. This I believe is more for the sake of making some show of opposition than anything else, and is easily overcome by authority.

NASSICK.

One Vaccinator under Sub-Assistant Surgeon A. SUMMERS.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	570	....	....	426	74·7
1864	711	141	....	573	80·5

I have the gratification of reporting that vaccination has been carried on to a larger extent during the past year compared with the preceding one of 1863—the increase amounting to 141 subjects. The children vaccinated were 398 males and 313 females, making a total of 711.

BELGAUM.

One Vaccinator under the Civil Surgeon,

Surgeon Major G. G. W. MAITLAND.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	547	....	....	536	98·0
1864	689	142	....	669	98·0

The increase in the number vaccinated during the year, as shown in the above table, is no doubt owing to the fact that during the past eight months the vaccinator has been assisted by a peon, obligingly furnished by the Collector at my request. The total number of children vaccinated in the town of Belgaum is 689; of these 669 were successful and 22 failed.

The vaccinator has likewise been engaged in vaccinating in the cantonment, and at the Garrison and Detail Hospital. In the former, 96 persons were vaccinated, at the latter 22, showing a total 807 vaccinations as the actual work performed by the station vaccinator.

The quality of the lymph throughout the year has been uniformly good, and although cholera prevailed in the town and cantonment during the months of April and May, it but slightly interfered with the progress of vaccination.

DHARWAR.

One Vaccinator under the Civil Surgeon,

Assistant Surgeon E. H. R. LANGLEY (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	1,080	....	....	971	89·9
1864	872	....	208	771	88·4

During the past year 872 persons have been vaccinated, whilst in 1863 there were 1,080, showing a decrease of 208 between the two years in the number vaccinated; there were 771 successful cases recorded or 88·4 per cent. on the whole: 691 were above one year, 181 under

one year: the decrease in the number vaccinated may be accounted for from the fact that small-pox did not prevail in an epidemic form during the year, and that therefore the Natives were not so willing or anxious to undergo vaccination. The lymph appears to have been of good quality, and, judging from the vesicles, it did not deteriorate in character. The conduct of the vaccinator satisfactory, and his work carefully performed.

KOLAPOOR.

One Vaccinator under the Civil Surgeon,

Surgeon J. MILLS.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	3,022	....	....	2,945	97·4
1864	1,860	....	1,162	1,844	99·1

The annexed statement shows a very great falling off in the number of vaccinations performed during the past year, there having been 1,162 less than in 1863 and 906 less than the average of the previous five years. Several circumstances have combined to cause this diminution, among which the principal are as follows:—

As noticed by me, in the remarks appended to the Monthly Return for January, a vaccinator was appointed under the Superintendent of Vaccination, S.C., in the Pethas of Punalla and Bhoodergud; this was at first, I believe, intended as a temporary measure, but he has remained throughout the year, and has operated in many of the villages formerly depending entirely on the station vaccinator, who has in consequence not obtained as many children in those villages as in former years. In 1863 small-pox prevailed extensively in many villages, diminishing the numbers of children left for vaccination in 1864 in two ways, viz. by impelling many parents to have their children vaccinated, and by attacking many children. Cholera has prevailed throughout the districts during 1864 very severely, and this always acts most prejudicially in impeding vaccination.

I am not aware that there has been much more opposition to vaccination than in former years, though probably the fact that during the past year the administration of the State has been for the first time entirely in the hands of the Native authorities, may have made the subordinate village officials less prompt than formerly in giving assistance. The increase in the proportion of children under one year of age, which has been noticed in the two preceding years, continues to progress, being in 1861, 16 per cent.; in 1862, 18; in 1863, 24; and in 1864, 32 per cent. The lymph has been supplied to the camp, whenever required, and has also been sent to several of the vaccinators on the establishment of the Superintendent, S. C.

RUTNAGHERRY.

One Vaccinator under the Civil Surgeon,

Assistant Surgeon H. Day, M.D.

Years.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	713	....	....	572	80·2
1864	987	274	....	740	75·0

The return of the number of cases vaccinated this year compares favorably with the return of the preceding year. It will be seen that 274 more cases have been operated upon during the year; the per-centage of success, however, is not so great, but the difference is not very marked.

VINGORLA.

Senior Apothecary S. Hanson.

Years.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	162	....	....	145	89·5
1864	238	76	....	227	95·3

The total number vaccinated during the year 1864 was 238, being an increase of 76 on that of the previous year. Of these 111 were male and 127 female children. 73 were under one year, and 165 above that age. The successful vaccinations have been 227, or 95·3 per cent. on the total number vaccinated. The lymph and vesicles were good.

HONORE.

One Vaccinator under the Civil Surgeon,

Assistant Surgeon E. M. Ross.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	474	....	....	371	78·2
1864	547	73	....	475	86·8

I have much pleasure in noticing an increase in the number vaccinated by the station vaccinator during the year under report of 73 over the number operated on in the preceding year. I regret to state, however, that the people, especially the Brahmins and upper class Hindoos, are still as averse as ever to the reception of the prophylactic. I believe that nothing short of legislative interference (and how urgently it is called for may be judged by the prevalence of small-pox epidemic in and near Compta, Gairsoppah, and other parts of North Canara) will ever cause it to be universally adopted. The people are so blinded by their religious prejudices that they will not see the advantages that the prophylactic holds out to them, and it is hopeless ever to induce them by mere argument and example willingly to submit to it.

The enforcement by legislation of vaccination on the people would be the means of saving hundreds of lives annually in North Canara alone, and the importance of this fact, with reference both to humanity and to its political bearing in a country already far too thinly populated, is, I think, sufficient to outweigh all considerations against the measure.

KAIRA.

One Vaccinator under the Civil Surgeon,

Assistant Surgeon A. N. E. RIDDELL (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding year.		Sucessfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	433	....	....	358	82·7
1864	683	250	....	574	84·0

683 children have been vaccinated during the past year. Of these the result was doubtful in 109 cases; in the remaining 574 it was successful. Of the total vaccinated 619 were Hindoos and 64 were Mussulmans; 518 were under one year and 165 were above that age. By this return it will be seen that a slight increase has taken place in the numbers vaccinated as compared with the returns of last year.

No opposition is offered to the practice of vaccination; on the contrary the natives appear to recognize the value of it, and readily avail themselves of its benefits.

The vaccine lymph employed and the vesicles have uniformly been of fair average quality.

AHMEDABAD.

One Vaccinator under the Civil Surgeon,

Surgeon Major D. WYLLIE, M.D.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
18	2,686	....	....	2,588	96·3
186	3,440	778	....	3,429	99

Vaccination was more largely practised than during any previous years, the number exceeding by 778 that accomplished in 1863. The increase is simply due to the circumstance of the vaccinator having had, since June last, the services of a municipal peon specially detailed for this duty, whereas formerly he was dependent on such intermitting and uncertain assistance as the police could give, and that latterly rendered with something like reluctance. The change adverted to has, therefore, fully realized the expectation expressed in the last Annual Report.

The vaccinator was employed on 356 days during which all the different quarters of the city were gone over oftener than once, and the more populous neighbourhoods repeatedly. The greatest number of operations was in June, when 361 were vaccinated, and the smallest in March, when there were only 150; work being at all times hindered by the prevalence of measles. In respect of sex, male preponderated, as invariably happens; the numbers being 1,925 to 1,539 females. These figures are in close keeping with the relative proportion of the sexes vaccinated on an average of the past five years. There were 2,655 operations "under" and only 809 "above" one year. Ever since 1858 each year's experience has shown a large and growing increase in the proportion of vaccinations under one year—a fact of some significancy not only as confirmatory of the advance of popular appreciation but as illustrative of the success that has attended the past working of the department. The results were particularly gratifying, the per-centage of successful cases, viz. 99·, being much higher than has hitherto been attained. In other words, there were only 9 failures and 26 doubtful out of a total of 3,464 vaccinations.

The lymph employed was that introduced from Europe towards the close of last year. It has invariably produced a large, well-formed, typical vesicle, and has never exhibited any tendency to deterioration. Supplies were sent to Deesa, Aboo, Sadra, and other stations during the year. There was not a single case of small-pox in the city, throughout; but within the last two months a few instances have happened in camp, all, however, due to importation. The practice of inoculation has long since ceased as respects this neighbourhood. Vaccination is never openly opposed, and there are seldom any more serious obstacles to its spread than apathy and indifference on the part of the people, with here and there some remains of prejudice, to contend against. Refusals, however, are comparatively rare, and are now, with very few exceptions, limited to the lower classes of the Mussulman population.

SURAT.

One Vaccinator under the Civil Surgeon,

Assistant Surgeon W. A. SHEPHERD.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	1,955	....	....	1,749	89·4
1864	2,234	279	....	2,057	92·1

No report received.

BROACH.

One Vaccinator under the Civil Surgeon,

Assistant Surgeon G. GLEN.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	1,203	....	....	1040	78·9
1864	1,221	18	....	1092	89·4

Vaccination continues to be carried on steadily in Broach, the numbers operated upon amounting to 1,221, being an increase of 18 on that of the previous year. The number of males vaccinated nearly double that of females, and the numbers under one year amount to 742 and 479 above that age. Vaccination is gradually being received more favourably by the population of the town and neighbourhood—a goodly number voluntarily coming to hospital in search of its benefits. Hindoos and Mussalmans as usual make up by far the greater proportion of cases, and the Parsees, hitherto so inexplicably prejudiced against it for such an otherwise intelligent class, have this year shown much less backwardness to submit their children to the prophylactic.

RAJCOTE.

One Vaccinator under the Civil Surgeon,

Assistant Surgeon E. R. Butler.

Years.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	1,341	....	....	1,192	88·9
1864	1,117	....	224	959	85·9

No report received.

KURRACHEE.

One Vaccinator under the Civil Surgeon,

Surgeon J. Bean.

Years.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	3,945	....	....	3,945	100·0
1864	1,964	....	1,981	1,829	93·1

The returns of vaccination for the year show 1,829 successful operations out of 1,964 performed by the station vaccinator; but they at the same time show a large apparent decrease in the numbers as compared with the preceding year; this is attributable to the operations performed by a vaccinator from the establishment of the Superintendent of Vaccination in Sind, who was ordered on duty here during the great prevalence of small-pox in the early part of the year, not having been recorded in the civil returns for Kurrachee, but in those of the Superintendent. It is to be regretted that certain castes of Hindoos continue to refuse permission for their children to be vaccinated, and during the period under report the proportion of Hindoos as compared with Mussalmans is even less than before. Mekranees and some others come to the Civil Hospital voluntarily and without any solicitation for the purpose.

HYDRABAD.

One Vaccinator under the Civil Surgeon,

Assistant Surgeon N. HOPKINS (Acting).

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	1,115	....	....	872	78·2
1864	812	....	303	583	71·8

Vaccination has been performed twice every week at the Civil Hospital under my personal superintendence. The above return contains only the summary of all such cases as I have personally examined. Of this number 415 are reported successful, 70 as unsuccessful, and 110 as doubtful. This return shows an undoubted falling off in comparison with the same period of last year; but whilst I can vouch for the accuracy of this return, I cannot do so for that of the previous year. The vaccinator employed during the past and many former years was discharged in the month of May for disobedience and general misconduct, and the present vaccinator entertained. He has been zealous in the discharge of his duties, and the returns have increased since he has taken charge of the vaccination here. In the month of January I received from private sources a supply of English lymph in capillary tubes from the Jennerian Society's Depôt in London. Strange to say it signally failed in every case, and yet it was procured under circumstances which altogether prevented anything but lymph from *genuine* vaccine vesicles being supplied.

The same plan has been pursued since I have had charge of the civil duties as regards vaccination as was carried on by my predecessor Dr. Riddell,—that is, all the cases are brought for me to see and decide whether the case should be reported successful or otherwise.

SHIKARPOOR.

One Vaccinator under the Civil Surgeon,
Assistant Surgeon J. F. FFOLLIOTT.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	1,618	....	....	1,456	89·9
1864	1,358	....	260	1,252	92·2

The total number vaccinated during the year exhibits a falling off of 260 compared with the preceding year: this decrease may be reasonably accounted for, by the fact of the whole population under 10 years being protected by vaccination and the operations being consequently limited to children born within the year. Only 69 individuals over one year old have been vaccinated, and they were mostly Puttans who came of their own accord from the Kaffila Serai to have the operation performed. On referring to the Fouzdar's register of vital statistics, I find the number of births in the town of Shikarpoor much below the average, viz. 988, the mean of the four preceding years being 1,391.

Vaccination is conducted in my presence every Monday at the Charitable Dispensary, and the quality of the lymph and character of the vesicles continue satisfactory. Lymph has been supplied to the Civil Hospital at Jacobabad, and Dispensary at Sukkur, when required.

KOTREE.

One Vaccinator (Municipality's) under the Civil Surgeon,
Assistant Surgeon R. McCONNELL.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	112	....	....	108	96·4
1864	426	314	....	351	82·4

This is the annual return of vaccination for the year 1864, performed by the vaccinator entertained and paid by the Kotree Municipality under the superintendence of the Civil Surgeon, there being no Government vaccinator attached to the Kotree Civil Hospital. Of the number 426, vaccinated during the year, 351 are recorded successful, and I have every reason to believe the return correct, having personally inspected the majority of the cases. I considered the lymph and vesicles pretty good. The vaccinator experienced some considerable difficulty in persuading the natives to allow themselves or their children to be vaccinated, except when accompanied by a peon; and as the latter was not always available from the Kardar's Establishment, on being brought to the notice of the Municipal Commissioners at a general meeting, it was unanimously agreed that a peon be employed to accompany and assist the vaccinator, subject to the sanction of the Commissioner in Sind.

KUTCH.

Mr. SUDDASHEW HEMRAJ, G.G.M.C.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	15	....	....	....	....
1864	193	178	....	111	57·5

No report received.

ADEN.

One Vaccinator under the Civil Surgeon,
Surgeon J. F. STEINHAEUSER, M. D.

YEARS.	Total Vaccinated.	Compared with the preceding year.		Successfully Vaccinated.	Per-centage of Success.
		Increase.	Decrease.		
1863	622	....	....	426	68·5
1864	446	....	176	334	74·9

The result of the vaccination at this station has proved more unsatisfactory during the year under consideration than in the preceding year, but from unavoidable causes.

The lymph employed at the commencement of 1864 was good, producing typical vesicles until the month of June, when they began to evince signs of deterioration by running too rapidly through their course. In the month of July this feature became so strongly marked that it was thought advisable to discontinue the use of this inefficient lymph and to trust to the arrival of fresh virus which for the last 10 years had been forwarded annually in August and September from England to Aden through the India Office. For reasons unknown and contrary to custom, the National Vaccine Establishment or the India Office sent no lymph during the year, and the application to Bombay for a supply remained unanswered until the end of November; the station was therefore four full months without vaccination. From January to July a fair number of children were subjected to the operation; during these months in fact the whole vaccination of the year took place. As is usual at Aden, the number of children vaccinated whose age is above one year, disproportionately exceeds that of infants under one year who are not readily obtained from Arabs, Jews, or Somalis, constituting the bulk of the population of this settlement. In like manner the number of males subjected to the operation is far larger than that of females.

APPENDIX.

TABLE

VACCINATION UNDER SUPERIN-

Table showing the Number and Names of the Circles, and their Superintendents; the those of last Year; the Total Number arranged according to Sex, Caste, Age, and Operations performed by each

Number.	Circles.	Names of the Medical Officers. Superintendents of Vaccination.	Number of Native Vaccinators attached.	Total number Vaccinated.	Compared with last year.		
					1863	Increase.	Decrease.
1	CENTRAL	Assistant Surgeon P. S. Turnbull, M.D. ..	34	69,299	47,646	21,653	..
2	SOUTHERN	,, F. H. Plumptre.....	31	34,708*	28,680	6,028	..
3	NORTHERN	,, R. Dick, M.D.	34	67,487	49,346	18,141	..
4	SIND	,, J. Pinkerton, M.D.....	17	46,440	39,443	6,997	..
5	KATTYWAR	,, E. R. Butler, M.D.	8	6,682	5,415	1,267	..
6	REWA KANTA.....	,, W. Fleming	5	3,195	02	193	..
7	PRESIDENCY	Sub-Assistant Surgeon Anunta Chundroba.	3	7,495	7,016	479	..
		Total..	132	235,306	180,548	54,758	..

* Not including 2,834 Vaccinations by the

No. I.

TENDENTS IN BRITISH TERRITORY.

Number of Vaccinators employed; the Total Vaccinations performed and compared with Result; the Ratio of Successful to Total Vaccinated; and the Average Number of Vaccinator, for the Year 1864.

Total Number Vaccinated, arranged according to													
Sex.		Caste.					Age.		Result.			Ratio per cent. of Successful to Number Vaccinated.	Average Number of Persons Vaccinated by each Vaccinator.
Males.	Females.	Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.		
36,474	32,825	63,484	2,717	29	..	3,069	7,910	61,389	66,141	1,485	1,673	95·4	2,038
18,508	16,200	32,214	1,981	89	..	424	5,115	29,593	32,767	956	985	94·4	1,120
36,825	30,662	56,919	5,823	16	159	4,570	32,621	34,866	61,741	2,928	2,818	91·5	1,983
25,909	20,531	5,567	37,756	5	..	3,112	15,729	30,711	43,151	397	2,892	92·9	2,732
3,534	3,148	5,989	614	..	..	79	3,029	3,653	6,173	287	222	92·4	835
1,587	1,608	2,693	412	1	..	84	1,738	1,457	2,906	218	71	91·0	639
4,197	3,298	4,738	1,169	852	566	170	3,252	4,243	5,696	769	1,030	75·9	2,498
127,034	108,272	171,609	50,472	992	725	11,508	69,394	165,912	218,575	7,040	9,691	92·9	1,783

Municipalities in the Southern Districts.

TABLE

Vaccination under Superintendents

Table of Vaccination through the Agency of Native Chiefs, arranged according to for the

Number.	Circles and Stations.	Medical Officers.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last year.		
					1863	Increase.	Decrease.
1	Central	Assistant Surgeon P. S. Turnbull, M.D. ..	2	2,550	1,221	1,329	..
2	Southern	„ F. H. Plumptre	22	18,816	15,319	3,497	..
3	Northern	„ R. Dick, M.D.	11	19,564	16,317	3,247	..
4	Kattywar	„ E. R. Butler, M.D.	20	20,007	15,704	4,303	..
5	Rewa Kanta	„ W. Fleming	5	3,264	4,089	..	825
6	Bhooj	Mr. Sadashew Hemraj, G. G. M. C.....	4	193	15	178	..
		Total..	64	64,394	52,665	11,729	..

No. II.

AND OTHERS IN NATIVE TERRITORY.

the Circles of Vaccination and Stations, and showing Details as in Table No. I. year 1864.

Total number Vaccinated, arranged according to												Ratio per cent. of Successful to Number Vaccinated.	Average Number of Persons Vaccinated by each Vaccinator.
Sex.		Caste.					Age.		Result.				
Males.	Females.	Hindoos.	Musulmans.	Christians.	Parsees.	Other Castes.	Under one year.	Above one year.	Successful.	Unsuccessful.	Doubtful.		
1,353	1,197	2,367	60	..	..	123	604	1,946	2,334	78	138	91·5	1,275
9,923	8,893	17,024	876	232	1	683	4,091	14,725	17,345	934	537	92·3	855
10,251	9,313	16,928	1,201	2	..	1,433	8,536	11,028	17,840	961	763	91·2	1,778
11,025	8,982	16,928	2,930	..	..	149	9,251	10,756	18,365	987	655	91·7	1,000
1,608	1,656	2,935	140	..	3	186	1,877	1,387	3,069	62	133	94·0	653
95	98	119	73	..	1	..	54	139	111	72	10	57·5	48
34,255	30,139	56,301	5,280	234	5	2,574	24,413	39,981	59,064	3,094	2,236	91·7	1,006

VACCINATION UNDER CIVIL

Table of Vaccination under Civil Surgeons and others, arranged according for the

Number.	Division of Deputy Inspector-General of Hospitals.	Civil Stations.	Number of Native Vaccinators attached.	Total Number Vaccinated.	Compared with last year.			Sex.	
					1863	Increase.	Decrease.	Males.	Females.
1	Presidency	Tanna	..	64	71	..	7	29	35
		Alibaugh	..	213	89	124	..	118	95
		Bandora	..	57	65	..	8	34	23
		Coorla	..	30	9	21	..	20	10
		Oorun	..	276	..	..	..	153	123
		Total	..	640	234	130	..	354	286
2	Poona	Poona	1	1,878	1,918	..	40	1,168	710
		Ahmednuggur	1	1,413	1,260	153	..	846	567
		Sattara	1	2,230	3,832	..	1,602	1,239	991
		Dhoolia	1	764	732	32	..	440	324
		Sholapoor	1	1,459	1,438	21	..	663	796
		Nassick	1	711	570	141	..	398	313
		Total	6	8,455	9,750	..	1,295	4,754	3,701
3	Northern	Ahmedabad	1	3,464	2,686	778	..	1,925	1,539
		Kaira	1	683	433	250	..	453	230
		Surat	1	2,234	1,955	279	..	1,415	819
		Broach	1	1,221	1,203	18	..	742	479
		Rajcote	1	1,117	1,341	..	224	589	528
		Total	5	8,719	7,618	1,101	..	5,124	3,595
4	Southern	Belgaum	1	689	547	142	..	405	284
		Dharwar	1	872	1,080	..	208	455	417
		Hooblee	1	1,353	1,088	265	..	694	659
		Kolapoor	1	1,860	3,022	..	1,162	993	867
		Rutnagherry	1	987	713	274	..	590	397
		Vingorla	..	238	162	76	..	111	127
		Honore	1	547	474	73	..	265	282
		Total	6	6,546	7,086	..	540	3,513	3,036
5	Sind	Kurrachee	1	1,964	3,945	..	1,981	1,253	711
		Hydrabad	1	812	1,115	..	303	454	358
		Shikarpoor	1	1,358	1,618	..	260	696	662
		Kotree	1	426	..	..	..	249	177
		Dispensaries	..	3,828	2,563	1,265	..	2,147	1,681
		Total	4	8,388	9,241	..	1,279	4,799	3,589
6	Aden	Aden	1	446	622	..	176	367	79
7	Persian Gulf	Bushire	..	..	231				No
		Grand Total	22	33,194	34,782	..	1,588	18,911	14,283

SURGEONS AND OTHERS.

*to Divisions, and showing the Details as in Table No.*1 .

year 1864.

Total Number Vaccinated, arranged according to											
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.	Number of Persons Vaccinated by each Vaccinator.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under One Year.	Above One Year.	Successful.	Unsuccessful.	Doubtful.		
40	4	15	2	3	27	37	51	7	6	79·7	64
180	7	3	..	23	66	147	196	11	6	92·0	213
16	11	30	..	..	31	26	32	20	5	56·1	57
8	1	21	..	..	6	24	18	2	10	60·0	30
245	24	6	1	..	120	156	223	9	44	81·0	276
489	47	75	3	26	250	390	520	49	71	81·2	..
1,546	294	29	9	..	944	934	1,555	135	188	81·7	1,878
1,230	143	39	1	..	619	794	1,236	104	73	87·4	1,413
2,059	91	11	5	64	838	1,392	1,719	196	315	77·0	2,230
531	129	11	..	93	546	218	692	28	44	90·5	764
710	473	1	..	275	519	940	782	373	304	53·6	1,459
501	76	16	..	118	451	260	573	4	134	80·5	711
6,577	1,206	107	15	550	3,917	4,538	6,557	840	1,058	77·5	1,409
2,880	523	9	8	44	2,655	809	3,429	9	26	99·0	3,464
619	64	..	..	..	518	165	574	..	109	84 0	683
1,754	441	6	51	2	1,054	1,180	2,057	74	103	92·1	2,234
751	380	2	68	20	748	473	1,092	31	98	89·4	1,221
949	175	2	4	17	508	609	959	99	59	85·9	1,117
6,903	1,583	19	131	83	5,483	3,236	8,111	213	395	93·1	1,744
574	106	9	..	..	383	306	669	20	..	98·0	689
752	107	13	..	..	181	691	771	94	7	88·4	872
934	408	10	..	1	315	1,038	1,194	107	52	88·2	1,353
1,833	27	..	..	..	601	1,259	1,844	2	14	99·1	1,860
866	120	1	..	..	242	745	740	89	158	75·0	987
215	2	21	..	..	73	165	227	3	8	95·3	238
448	10	85	..	4	71	476	475	51	21	86 8	547
5,622	780	139	..	5	1,866	4,680	5,920	366	260	90·4	1,091
312	1,352	115	43	142	996	968	1,829	63	72	93 1	1,964
278	520	3	..	11	601	211	583	77	152	71·8	812
782	572	4	..	..	1,289	69	1,252	88	18	92·2	1,358
97	280	22	..	27	117	309	351	37	38	82·4	426
1,784	1,913	4	..	127	1,165	2,663	3,429	255	144	89·5	..
3,253	4,637	148	43	307	4,168	220	7,444	520	424	88·8	1,140
10 returns received.	2	1	..	433	60	386	334	66	46	74·9	446
22,854	8,255	489	192	1,404	15,744	17,450	28,886	2,054	2,254	87·0	1,357

TABLE

General Abstract of Vaccination

Designation of Tables.	Total Number Vaccinated.	Compared with last year.			Sex.	
		1863	Increase.	Decrease.	Males.	Females.
No 1, Vaccination under Superintendents in British Territory	2,35,306	1,80,548	54,758	..	1,27,034	1,08,272
No 2, Ditto ditto and others in Native ditto ..	64,394	52,665	11,729	..	34,255	30,139
No 3, Ditto under Civil Surgeons, &c.	33,194	34,782	..	1,588	18,911	14,283
Total..	3,32,894	2,67,995	64,899	..	1,80,200	1,52,694

No. IV.

FOR THE YEAR 1864.

Total Number Vaccinated, arranged according to										
Caste.					Age.		Result.			Ratio per Cent. of Successful to Number Vaccinated.
Hindoos.	Mussulmans.	Christians.	Parsees.	Other Castes.	Under One year.	Above One year.	Successful.	Unsuccessful.	Doubtful.	
1,71,609	50,472	992	725	11,508	69,394	1,05,912	2,18,575	7,040	9,691	92·9
56,301	5,280	234	5	2,574	24,413	39,981	59,064	3,094	2,236	91·7
22,854	5 5	489	192	1,404	15,744	17,450	28,886	2,054	2,254	87·0
2,50,764	64,007	1,715	922	15,486	1,09,551	2,23,343	3,06,525	12,188	14,181	92·1

TABLE No. V.

TABLE OF AGES.

Vaccination in 1864, *arranged according to Ages, whether performed under or above One Year of Age.*

ESTABLISHMENTS, &c.	AGE.		DIFFERENCE.		Total Vaccinated.
	Under One Year.	Above One Year.	Under.	Above.	
I.—Superintendents in British Territory....	69,394	1,65,912	....	96,518	2,35,306
II. Ditto and others in Native do..	24,413	39,981	....	15,568	64,394
III. Civil Surgeons and others	15,744	17,450	....	1,706	33,194
Total...	1,09,551	2,23,343	....	1,13,792	3,32,894
I.—Superintendents in British Territory.					
Presidency Circle	3,252	4,243	....	991	7,495
Northern do.	32,621	34,866	....	2,245	67,487
Central do.	7,910	61,389	....	53,479	69,299
Southern do.	5,115	29,593	....	24,478	34,708
Sind do.	15,729	30,711	....	....	46,440
Kattywar do.	3,029	3,653	....	624	6,682
Rewa Kanta do.	1,738	1,457	281	....	3,195
II.—Superintendents and others in Native Territory.					
Northern Circle.....	8,536	11,028	....	2,492	19,564
Central do.	604	1,946	....	1,342	2,550
Southern do.	4,091	14,725	....	10 634	18,816
Kattywar do.	9,251	10,756	....	1,505	20,007
Rewa Kanta do.	1,877	1,387	490	....	3,264
Bhooj	54	139	....	85	193
III.—Civil Surgeons and others.					
Tanna	250	390	....	140	640
Alibaugh	66	147	....	81	213
Baudora	31	26	5	....	57
Coorla	6	24	....	18	30
Ooruu	120	156	....	36	276
Poona	944	934	10	....	1,878
Ahmednuggur	619	794	....	175	1,413
Sattara	838	1,392	....	554	2,230
Sholapoor.....	546	218	328	....	764
Dhoolia	519	940	....	421	1,459
Nassick.....	451	260	191	....	711
Ahmedabad	2,655	809	1,846	....	3,464
Kaira	518	165	353	....	683
Surat.....	1,054	1,180	....	126	2,234
Broach.....	748	473	275	....	1,221
Rajcote.....	508	609	....	101	1,117
Belgaum	383	3 6	77	....	689
Dharwar	181	691	....	510	872
Hoobleo.....	315	1,038	....	723	1,353
Kolapoor	601	1,259	....	658	1,860
Kutnagherry	242	745	....	503	987
Vingorla	73	165	....	92	238
Honore	71	476	....	405	547
Kurrachee.....	996	968	28	....	1,964
Hydrabad.....	604	211	390	....	812
Shikarpoor	1,289	69	1,220	....	1,358
Kotree	117	309	....	192	426
Dispensaries.....	1,165	2,663	....	1,498	3,828
Aden	60	386	....	326	446

TABLE No. VI.

EMPLOYMENT RETURN OF SUPERINTENDENTS OF VACCINATION FOR THE YEAR 1864.

CENTRAL CIRCLE.

Superintendent.—Assistant Surgeon P. S. TURNBULL, M.D.

MONTHS.	Number of Stations visited.	Distance Travelled.	Number of Travelling Days.	Number of Children Inspected.	SUMMARY OF REMARKS.
January	7	53	7	878	7 Villages visited and inspected.
February	1	61	8	416	9 Do. do.
March					Change of Superintendent. No return received.
April.....	6	64	5	471	8 Villages visited and inspected.
May.....	13	152	14	796	20 Do. do.
June.....	4	55	4	84	3 Do. do.
July.....					
August.....					
September ..					
October	3	48	5	329	9 Villages visited and inspected.
November ..	8	207	7	1,267	29 Do. do.
December ..	12	154	10	3,942	40 Do. do.
Total..	54	794	60	8,183	

NORTHERN CIRCLE.

Superintendent.—Assistant Surgeon R. DICK, M.D.

MONTHS.	Number of Stations Visited.	Distance Travelled.	Number of Travelling Days.	Number of Children Inspected.	SUMMARY OF REMARKS.
January	11	87	12	329	12 Villages visited and inspected.
February	21	110	14	775	21 Do. do.
March					
April	13	226	12	437	9 Villages visited and inspected.
May.....	17	109	15	514	16 Do. do.
June.....	11	43	10	206	11 Do. do.
July.....	2	58	1	....	
August.....					
September ..					
October					
November ..					
December ..	14	98	14	520	13 Villages visited and inspected
Total..	89	731	78	2,771	

SOUTHERN CIRCLE.

Superintendent.—Assistant Surgeon F. H. PLUMPTRE.

MONTHS.	Number of Stations Visited.	Distance Travelled.	Number of Travelling Days.	Number of Children Inspected.	SUMMARY OF REMARKS.
January	8	101	10	279	5 Villages visited and inspected.
February....	8	56	8	479	9 Do. do.
March	6	98	9	124	5 Do. do.
April.....	6	52	6	125	5 Do. do.
May	6	79	7	134	6 Do. do.
June					
July					
August.....					
September ..					
October	8	94	7	144	4 Villages visited and inspected.
November ..	7	88	8	242	5 Do. do.
December ..	12	123	11	81	4 Do. do.
Total..	61	691	66	1,608	

SIND CIRCLE.

Superintendent.—Assistant Surgeon J. PINKERTON, M.D.

MONTHS.	Number of Stations Visited.	Distance Travelled.	Number of Travelling Days.	Number of Children Inspected.	SUMMARY OF REMARKS.
January	18	147	16	2,210	103 Villages visited and inspected.
February....	16	164	16	1,737	66 Do. do.
March	31	378	26	902	45 Do. do.
April	11	84	11	717	21 Do. do.
May	12	79	16	903	55 Do. do.
June	9	48	8	869	56 Do. do.
July	8	204	10	299	22 Do. do.
August.....	..	..	..	54	
September ..	60	50	5	186	13 Do. do.
October	7	85	8	30	6 Do. do.
November ..	14	146	12	224	34 Do. do.
December ..	17	127	16	2,161	135 Do. do.
Total..	203	1,512	144	10,292	

KATTYWAR CIRCLE.

Superintendent.—Assistant Surgeon E. R. BUTLER, M.D.

MONTHS.	Number of Stations visited.	Distance Travelled.	Number of Travelling Days.	Number of Children Inspected.	SUMMARY OF REMARKS.
January	13	264	25	657	20 Villages visited and inspected.
February....	10	171	15	430	16 Do.
March					
April.....	16	253	14	263	10 Villages visited and inspected.
May	16	303	25	813	27 Do. do.
June.....	4	49	4	89	6 Do. do.
July					
August.....					
September ..					
October	8	98	10	212	Several villages examined.
November ..	8	253	17	1,170	21 do.
December ..	13	284	25	932	32 do.
Total..	88	1,675	135	4,566	

REWA KANTA CIRCLE.

Superintendent.—Assistant Surgeon W. FLEMING.

MONTHS.	Number of Stations Visited.	Distance Travelled.	Number of Travelling Days.	Number of Children Inspected.	SUMMARY OF REMARKS.
January	..	....	..	..	Received charge from Assistant Surgeon Adey.
February	..	....	..	..	
March	..	....	..	..	At Dohud with the Guzerat Bheel Corps.
April	..	....	..	..	
May.....	..	....	..	..	
June.....	..	....	..	..	
July.....	..	....	..	..	
August.....	..	....	..	..	
September ..	..	....	..	..	
October	..	....	..	..	
November ..	..	....	..	..	
December ..	2	178½	24	504	Inspected Kololoe and Godra Districts.
Total..	2	178½	24	504	

GENERAL DEPARTMENT.

GOVERNMENT RESOLUTION, No. 828, 12TH MAY 1865.

His Excellency the Governor in Council is glad to learn that the Returns for the year under report show a decided improvement, the total number of Vaccinations being an increase of 64,899 over that of the preceding year. This increase is very satisfactory.

2. The number of Vaccinations in 1863 of children under one year of age was 92,948, whereas the returns for the year under report give 109,551, being an increase of 16,600. This also is satisfactory.

3. Dr. Stovell states that the people in the Deccan and the S. M. Country have stronger prejudices against infantile vaccinations than those in Guzerat and Sind. The Revenue Commissioner S. D. should be directed to inquire into the causes of this prejudice, and suggest to the Principal Inspector-General the best means of removing it.

4. His Excellency the Governor in Council believes that, as stated by Dr. Stovell, the pratice of inoculation is disappearing in most districts, and it will be sufficient in such districts to trust to the gradual spread of knowledge and to the appreciation by the people of the practical benefits of vaccination. If, however, it be found that professional inoculators still take advantage to any extent of the ignorance of the people in the less civilized parts of the country, it may be expedient to interfere. The Magistrate of Tanna should report on the 28th paragraph of the report, when it will be considered how far the provisions of the Penal Code are applicable.

5. There is another mode, however, by which inoculation may be superseded by vaccination, and the Principal Inspector-General should direct the Superintendents of Vaccination to turn their attention to it. It is not improbable that those who have hitherto gained a livelihood by inoculation may be induced to take employment as Vaccinators. The Governor in Council has been informed of an instance in which an old Brahmin who formerly practised inoculation would gladly enter the Government service as a Vaccinator. If the payment were by successful results, no harm could result from a trial of these suggestions.

6. His Excellency the Governor in Council approves of the views expressed on the subject of the vaccine lymph in paragraphs 34 and 35 of Dr. Stovell's report. The Secretary of State will be requested to communicate with the National Vaccine Establishment in London, in order to obtain and forward to this country a supply of lymph in the month of November of each year in the manner suggested by Dr. Stovell, and to arrange with the Peninsula and Oriental Steam Navigation Company to cause it to be kept in the ice-house of their steamers during the passage from Suez.

7. Vaccination, through the agency of the Municipalities, has been introduced into the Sattara Districts, and into the towns of Hooblee, Dharwar, Kotree, Poona, and Tanna. His Excellency considers that although the experiment in the Sattara Districts did not at first realize the anticipations entertained by Dr. Plumptre, the result is by no means discouraging.

Government Resolution No. 1100, dated 25th June 1864.

8. The very greatest assistance may be derived from the development of this agency. The Commissioner in Sind and the Revenue Commissioners should direct the attention of the Municipal Commissioners to it. His Excellency the Governor in Council does not see any grounds for Dr. Plumptre being dissatisfied with the results in Sattara. His disappointment is owing to his having expected too much from the Municipal Commissioners. They will provide the funds, and they will give valuable advice as to the feelings of the people and the means to be taken to overcome their prejudices, but he cannot reasonably expect them to exercise that supervision for which they have no special qualifications, and the Collector of Sattara was right in requesting the Superintendent to control the proceedings of the Municipal Vaccinators. So long as care is taken to consult the Municipal Commissioners or any general course of proceeding, details will be much better supervised directly by the Superintendent of Vaccination.

9. It is clear that the staff of Vaccinators in large towns is too weak. The want can be best supplied by the appointment of Vaccinators by the Municipal Commissioners, so as to leave the Vaccinators paid by Government more leisure for work in the Districts. In the Presidency town the number of Vaccinators appears to be ridiculously small, considering the number of persons still unvaccinated, and the Governor in Council requests that special inquiry may be made on this point, and that Dr. Stovell will suggest how the want may be supplied. If facilities be given for vaccination the people will accept it more freely, and the great object, next to the supplying of good vaccine matter, is to render vaccination accessible to the mass of the population. With only three

Vaccinators for all Bombay and one for Poona it is very doubtful whether this object is attained.

10. The state of vaccination in Sind, as reported in paragraphs 44 and 45 of Dr. Stovell's report, is considered by Government to be very satisfactory.

11. On the subject of paragraphs 47 and 48, the Principal Inspector-General may be referred to the Government Resolution No. 564, dated 3rd April 1865, with which copies of the Murathee, Guzerathee, and Canarese translations of the Vaccination Report for 1863 were forwarded to him.

12. It is not desirable to translate any more reports, as there is a great deal in these reports which, however interesting for record, cannot be appreciated by the native population. If Dr. Stovell will direct one of the Superintendents of Vaccination to mark any passages in the Report or Appendices which it may be considered useful to circulate, these extracts can be translated and distributed.

13. In conclusion, the Governor in Council desires to record his appreciation of the valuable services of the several Superintendents whose exertions have been prominently brought to notice by Dr. Stovell.

F. S. CHAPMAN,
Officiating Chief Secretary to Government.

BOMBAY: PRINTED AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.

00133637

Digitized with financial assistance from

Government of Maharashtra

on 01 February, 2020